

Prosodic Structure and Intonation in Maltese and its Influence on Maltese English

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I declare that the production of this thesis
and the work reported herein were carried out
by me except where otherwise stated.

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ABSTRACT

This thesis presents a formal characterisation of prosodic structure and intonation in Maltese. It also examines selected structures of Maltese English, specifically structures having an interrogative function, in order to determine areas of influence of Maltese on Maltese English.

Apart from accent-related rising and falling **nuclear tunes**, Maltese possesses two accent-related **post-nuclear tunes**. A tonal entity specific to structures such as vocatives, imperatives and tags is also identified. This **vocative contour** is similar to the post-nuclear tunes in many respects.

In order to account for the fact that the specific choice of post-nuclear tune depends on that of the preceding nuclear tune, a distinction between **independent** and **dependent** domains is postulated. A proposal to deal with post-nuclear entities as being extrametrical to the phonological phrase (P-phrase) containing the nuclear tune, but crucially occurring within the same intonational phrase (I-phrase), successfully incorporates the aforementioned characteristics of Maltese intonational phonology. The vocative contour is analysed along similar lines. I advance the claim that the focus domain in Maltese is the P-phrase rather than the I-phrase.

The distinctness of the falling nuclear statement tune from the falling vocative contour is adequately captured by an analysis in terms of H(igh) and L(ow) tones (Ts) which are attached either to accented syllables (T*) or to boundaries (T%). However, in order to capture the differences in implementation of the nuclear question tune from the post-nuclear statement tune, both of which have a rising contour, an extension of the framework is employed. This involves the reinterpretation of boundary tones in terms of whether they attach to phonological phrase (P-phrase) boundaries (T_p) or to intonational phrase (I-phrase) boundaries (T_i). This extension to the framework successfully allows for a representation of the Maltese tunes described here.

The influence of Maltese on Maltese English is evident at the levels of both prosodic structure and intonation. The account of prosodic structure and intonation of Maltese throws light on areas of the influence of Maltese on Maltese English at these levels of structure.

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PROSODIC STRUCTURE AND INTONATION IN MALTESE: INFLUENCE ON MALTESE ENGLISH

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INTRODUCTION

The surface of the ocean responds to the forces that act upon it in movements resembling the ups and downs of the human voice. If our vision could take it in all at once, we would discern several types of motion, involving a greater and greater expanse of sea and volume of water: ripples, waves, swells and tides. It would be more accurate to say ripples on waves on swells on tides, because each larger movement carries the smaller ones on its back.....

In speech (and in song - hence the name 'speech melody' to enforce the comparison), the ups and downs are those of the fundamental pitch of the voice, produced by the vibration of the vocal cords.....The ripples are the accidental changes in pitch, the irrelevant quavers. The waves are the peaks and the valleys that we call *accent*. The swells are the separations of our discourse into its larger segments. The tides are the tides of emotion.

(Bolinger 1964:19-20)

Anyone attempting to use writing as a means of portraying the sounds of speech will be aware of the difficulty involved in transcribing the prosodic patterning of these speech sounds into meaningful units in an adequate manner. Crude orthographic rules involving the use of punctuation have been devised to indicate in writing those nuances of meaning normally expressed in speech by prosodic means. Broadly speaking, the main functions of punctuation are, first, to chunk up the text in a way which reflects some of the details connected with the prosodic organization of speech and secondly, to signal grammatical meaning as embodied in speech in the intonational form given to particular structures.

Thus, for example, in many writing systems, the question mark frequently serves both to break up the text at points where a prosodic break would normally be present, and to cue the grammatical meaning of interrogativity expressed by the intonational form. The use of the question mark at the end of question word interrogatives can be called

upon to illustrate the inadequacy of punctuation as a system for cuing intonational form. Interrogatives of this type frequently have an intonational form more like that of declaratives (falling) than like that of yes-no interrogatives (rising) in a majority of languages (Cruttenden 1986:165-166). The writing systems of the languages which make this intonational distinction between question word and yes-no interrogatives, however, use the question mark indiscriminately to indicate **all** types of questions.

Finding punctuation inadequate for their purposes, writers often resort to the use of different forms of indirect speech, (dramatic dialogue such as that in plays or filmscripts meant for oral performance being an obvious exception). These different possible forms of indirect speech all allow for the cuing of grammatical meaning which is interpretable independently of the meaning contributed by intonational form (Crystal 1987:75,77).

The difficulty involved in devising an adequate system of punctuation for indicating both prosodic structure and intonational nuances is partly a function of the slipperiness of the phenomena involved. In fact, characterising these aspects of a language is often seen to be one of the more intractable tasks in the description of that language. Given that it is precisely prosodic structure and intonation that constitute the principal focus of this thesis, therefore, it will be worthwhile outlining some of the difficulties encountered by anyone attempting to tease out the elements involved in both these aspects of structure.¹

¹ In this work I sometimes refer to prosodic structure and intonation by means of the cover term **Intonational structure**.

0.1 Intonational structure and its relationship to other aspects of linguistic structure

Amongst the reasons for the difficulties involved in describing intonational structure is the fact that, as observed, for example, by Brown, Currie and Kenworthy (1980:21), speakers "exploit the resources of intonation in realising several different systems".

They point out that:

...a speaker may simultaneously wish to express deference, respond to a question initiating a new topic, and introduce new lexical material into his reply. Each of these very different systems will influence the intonation of the utterance.

Even putting aside the role of intonational structure in systems as diverse as those involving the expression of attitude, discourse structure and information structure mentioned above however, many of the problems involved in this field stem from the fact that the acoustic components involved in the auditory signalling of aspects of structure such as prosodic organization and intonation also serve to signal the presence of other components of linguistic structure. As pointed out, for example, by Couper-Kuhlen (1986:4, adapted from Crystal 1969:131), fundamental frequency (henceforward F0), the acoustic correlate of what we perceive as pitch, has both a segmental and a non-segmental function. At the segmental level, F0 is partly a function of what segments are present in the speech continuum. At the non-segmental level, F0 plays a part in signalling paralinguistic and non-linguistic effects, as well as linguistic ones. It is with the prosodic functioning of F0 that this thesis is concerned.

0.1.1 Segmental versus suprasegmental features

A distinction made by linguists working within the American structuralist tradition is that between **suprasegmentals**, "features which extend over more than one segment", and **segmentals** (Lehiste 1970:2). Features normally treated as suprasegmental generally include pitch, stress and quantity. The use of the term suprasegmentals often assumes a role for suprasegmentals which is secondary to that of segmentals (Couper-Kuhlen 1986:2).

0.1.2 Prosody and the interconnectedness of prosodic features

A slightly different perspective on the place of intonation within the system is suggested by those who use the term **prosody** in preference to **suprasegmentals**.

Intonation consists of more than merely a sequence of pitch movements. According to Couper-Kuhlen's definition of **prosody**, for example, "pitch" is merely "*a component of 'intonation'*" (my italics), in the same way that "loudness" is merely "*a component of 'stress'*" and "duration" is merely "*a component of 'rhythm' and 'tempo'*" (Couper-Kuhlen 1986:4).

The main component of the feature of stress, loudness, and components of rhythm and tempo such as duration influence pitch in a multitude of ways. The influence on pitch of these components has received a great deal of attention. Pitch also interacts in interesting ways with pause, the remaining prosodic feature mentioned by Couper-

Kuhlen (1986:4). Thus, the end of one intonation contour and the beginning of another may as easily be signalled by a change in the direction of the F0 contour as by an actual pause or break in the contour. The nature of the interplay of pause and pitch is crucial to the understanding of both prosodic structure and intonation and is therefore of central importance to this study. Although it is primarily with these prosodic features that I will be concerned in this work, consideration will also be given, however, to other prosodic features such as loudness and duration in so far as these affect the prosodic features being considered in this work.

0.2 Aims of this work

The aims of this thesis are twofold: first, to provide a characterisation of prosodic structure and intonation of Maltese; and second, to draw from this characterisation pointers to the nature of the influence of Maltese on aspects of the prosody of Maltese English, the English spoken by speakers of Maltese. The description tries to account in a principled way for various phenomena identified. The framework used is based on Pierrehumbert (1980) with notation adapted to suit the requirements of the description.

Chapter 1 consists of an outline of some of the sociolinguistic variables involved in the use of Maltese and English in Malta today of relevance to this study. Section 1.1 gives an account of the growth and development of Maltese.

This is followed in Section 1.2 by an account of the linguistic environment in present day Malta, a complex linguistic context within which it is possible to talk of the phenomenon of Maltese English.

Section 1.3 briefly discusses the problems relating to describing bilingual language use. A sample of such language use is illustrated in Subsection 1.3.1 and a working definition of Maltese English provided in Subsection 1.3.2. This is followed by an account of the method used for collecting natural Maltese English data characterised by a minimum of interference from Maltese.

Chapter 2 brings together remarks on the structural make-up of Maltese and Maltese English relevant to the description of intonational structure in Chapters 3 to 5. Section 2.1 focuses on grammatical considerations relevant to this study. Brief notes are provided on elements of Maltese structure. These notes are followed by an overview of the various sentence types used for exemplification in the latter part of this work. Lastly, the key factor in so far as the analysis of prosodic structure and intonation in Maltese is concerned is that involving the manipulation of information structure as a result of constituent order changes and this will therefore be discussed in some detail.

Section 2.2 consists of a description of selected features of the phonetics and phonology of Maltese. The summary account of segmental aspects of Maltese in Subsection 2.2.1 provides the necessary background for the review of work on stress in Maltese in Subsection 2.2.2 as well as for the account of intonational structure in Maltese in Chapter 4.

Section 2.3 presents a brief sketch of selected features of Maltese English. Particular attention is given to segmental characteristics. The section concludes with a slightly more detailed treatment of stress since this aspect of the description contributes to a better understanding of the aspects of the prosody of Maltese English presented in Chapter 5.

Chapter 3 compares different frameworks for the analysis of intonation with a view to providing a theoretical and terminological framework for this thesis. In view of the contributions to recent work in the tradition of intonational phonology of both the American Structuralist and the British traditions in intonational research, Section 3.1 outlines the basic components of both these traditions. This is followed in Section 3.2 by an overview of recent work in intonational phonology. The issue of post-nuclear stretches of speech is central to this thesis. A detailed discussion of this issue in Section 3.3 concludes the Chapter.

Chapter 4 starts with an introduction to some of the Maltese contours observed and notions necessary for their description (Section 4.1). Special emphasis will be given to the discussion of prosodic structure in Maltese (Subsection 4.1.3). A detailed

description follows of the phonetic implementation of four main tonal movements identified, two **independent** (Section 4.2) and two **dependent** (Section 4.3). A further section (Section 4.4) argues for yet another distinct tonal entity in Maltese and attempts to relate its analysis to that of the tonal phenomena described earlier in the Chapter. The Chapter will be concluded with an attempt at interpreting the facts about the phonology of Maltese noted so far. A number of independent issues relating to the phonology of the intonation of Maltese will be discussed together with the implications for intonational phonology (Section 4.5).

Aspects of the prosodic structure and intonation of Maltese English will be described in Chapter 5. Two main issues will be addressed. Of these two issues: the most relevant is that concerning what Maltese speakers of English choose to do with post-nuclear stretches of speech. The second related issue concerns intonational phrasing and the assignment of domains. It will be shown that although differences in intonational phrasing are one of the distinguishing characteristics of Maltese English, there are also differences in the choice of tunes especially in post-nuclear stretches of speech and also in other domains.

Chapter 6 summarises my findings as regards both the intonational phonology of Maltese and its influence on aspects of the prosody of Maltese English. Indications are also given as to directions for future work.

Chapter 1

SOCIOLINGUISTIC PERSPECTIVES ON MALTESE AND ENGLISH IN MALTA

1.1 The Maltese language and bilingualism in Malta

Maltese is the National language of Malta and is spoken by the greater part of the 360,000 inhabitants of the Maltese Islands. It is also still used as a first language by some Maltese emigrants, in particular, first and second generation emigrants living in large expatriate communities in Australia, Canada and the United States. In spite of its status as National language, however, Maltese does not hold sway alone, even within Malta's shores. Rather it shares official status with English and any "such other language as may be prescribed by Parliament" (*Constitution of the Republic of Malta* 1974:2). This official policy of bilingualism reflects, and is reflected in, the facts concerning language use at other levels of Maltese life.

1.1.1 Geographical and historical context

The Maltese Islands (area approximately 316km²) are situated in the central Mediterranean, a position which has often been referred to as the crossroads between East and West. In spite of their small size, the islands' geographical position has resulted in Malta's playing a central role in Mediterranean, and sometimes even world, affairs.

The British colonial period, starting in 1800, was the last in a series of foreign dominations. Malta gained independence in 1964. It is a member of the Commonwealth and has been a republic since 1974.

1.1.2 Origins and development of Maltese

Like much else that is Maltese, the Maltese language of today is an entity distinct from any other, having incorporated elements from various sources and subsequently transmuted them into something new.

Attempts to trace the precise origins of Maltese back to either Phoenician or Punic have, as Hull (1993:297) comments, "been totally discredited by modern scholarship".¹ Hull concludes, on the other hand, that there is no doubt that "Maltese derives from the Arabic introduced into Malta and Gozo some time between A.D. 870 and 1090". It has been suggested (cf. for example Cassola 1985:2) that it was probably as a manifestation of what is known as Siculo-Arabic that the Maltese language of today had its beginnings:

...Siculo-Arabic...was gradually transformed into...the linguistic phenomenon that is Maltese, a language whose morphology is almost entirely Semitic, and whose syntax and lexis are Romance. (My translation).

¹ For a contribution to the ongoing endeavour of illuminating what the author refers to as "the still fog-shrouded origins of our language" (my translation) cf. Brincat 1994a:138.

The heterogeneity of the Maltese language has been remarked upon by various authors (cf. especially "Maltese as a mixed language" Aquilina 1958, as well as other articles in Aquilina 1961; Mifsud 1992). In a paper called "Kattoliċità Maltija - jew il-vokazzjoni tal-*futtaba*" ("Maltese Catholicism - or the vocation of the matchmaker") Peter Serracino-Inglott (1989:266) says of Maltese that:

...the originality of our language lies in the melding of elements from Romance as well as other languages with an Arabic base... (My translation).

Maltese, therefore, consists precisely of this Semitic base upon which are superimposed various borrowings from other languages, English as well as the Romance languages. In a particularly succinct summary, Manwel Mifsud (1992:13-15) describes Maltese as consisting of what he calls the Semitic "*stratum*", which he describes as:

...the basis of the phonology, morphology and to a lesser extent the syntax of Maltese, while [on the other hand] the lexis of Semitic origin constitutes a nucleus of basic concepts, with more culturally sophisticated terms generally being of Romance or English origin...

the Romance "*superstratum*" which:

...consists of a large stock of lexical, syntactic, phonological and some morphological accretions...

and the English "adstratum":

...consisting mainly of lexical material adapted by Maltese since 1800 in two phases roughly distinguishable in terms of the English-Maltese contact...

The success of a language can often be attributed in part to its ability to adapt in the face of ever-changing realities. Documentation of the continuing adaptability of Maltese in the face of foreign accretions is available in a number of studies. While the most obvious level for such updating is the lexical one (cf. for example Borg, Albert² 1986), adaptation can also be noted at other levels of structure. Thus, for example, Mifsud (1992) demonstrates that, notwithstanding constraints such as those from the morphology of Maltese on borrowing from English (Brincat Massa 1986), Maltese has developed a hoard of successful morphological strategies for coping with borrowing from English as well as Romance. In fact, it has been suggested by Camilleri and Albert Borg (1992), that the kind of borrowing that takes place and the way it is brought about, often result in further transformation of the original Semitic base, cf. for example the oft-cited example of the English plural morpheme which, according to them, is rapidly becoming "an integral part of Maltese pluralising morphology". Although most of the examples quoted in these studies involve lexical borrowing and its effect on the morphology, it seems reasonable to suppose that the survival of Maltese is dependent on its ability to change at levels of structure other

² Throughout this work, references to work by Albert Borg and Alexander Borg are distinguished using the respective authors' full names.

than the lexical and morphological.³

1.1.3 The rise of multilingualism

One of the consequences of Malta's central role in Mediterranean affairs is a necessity, from the earliest days, for the Maltese to communicate both with merchant and trading peoples who visited the island in times of peace, and with unwelcome invaders in times of war. Brian Blouet (1967:44) describes the linguistic situation in Malta during the early stages of the development of Maltese as one in which the bulk of the population spoke "a dialect of Arabic augmented by Latin, Spanish and Italian words". Such an amorphous entity could quite conceivably have functioned as "a communication link between peoples of different ethnicity and heritage" (Serracino-Inglott 1989:266. My translation).

With the continuing development of Maltese into a language having a separate identity, however, the need for the local inhabitants to resort to other languages for communicating with the stream of traders and travellers stopping in Malta would definitely have increased. In fact, Blouet (1967:44) reports the use by "an elite group" of "a Romance language for purposes of social, economic and legal intercourse among themselves and with the outside world". Coupled with the reported increase in the use of Maltese for local purposes, reports such as Blouet's suggest that the linguistic reality in Malta could hardly have been a monolingual one. Multilingualism in Malta

³ cf. Camilleri and Albert Borg 1992 for a few examples of what they refer to as the "Englishisation of Maltese" at the levels of syntax and phonology.

can therefore be seen to be a phenomenon stretching to as far back as does the existence of Maltese as a language in its own right. It is therefore not surprising that the first major political issue that the Maltese were involved in as an emerging nation was what later became known as "The Language Question".⁴

1.1.4 "The Language Question"

Until the transfer of Malta to British sovereignty in 1800, the language issue was a two-pronged one in which the variables involved were Italian, the language of culture, Government and the Church, and Maltese, "the language of the kitchen". It was only after Malta's incorporation into the British Empire that English was introduced as a third linguistic variable in the debate. The British authorities made it increasingly desirable for the Maltese to have English as one of their languages, a fact which was not without political significance. Frendo (1975:30) comments:

Ironically, Maltese nationalists waved not the autochthonous Maltese carrier of mass culture as their banner, but the Italian national language and heritage, which the Maltese intelligentsia had cultivated for countless generations.

Marshall (1971), as well as Frendo in the article referred to earlier, traces the fortunes of Italian and English through the years leading up to independence. Frendo (1975:24) comments about what he refers to as the rather "curious" fact that "the British desired to promote the study of Maltese in the schools, mostly as a vehicle to teach English and thereby slowly eliminate Italian".

⁴ For a detailed examination of this issue cf. Hull 1993.

The Language Question raged on through the turn of the century, more or less to the end of the 1930s and in fact it was only the war that brought it to an end. Frendo (1975:31) comments as follows on the eventual outcome to the language debate:

Paradoxically, the Maltese language emerged as a synthesis of the pro-English and pro-Italian rivalry. The Maltese vernacular served as a social and emotive bond and became a natural unifier. Both Anglophiles and Italophiles thus contributed, unwittingly, to the success of Maltese nationalism and nationhood.

The success of the Maltese language as a symbol of national identity did not eliminate the need for access, by the people of this small community, to a "foreign" language with which to communicate with the wider international community, on which, after all, it depends for its very livelihood, the main industry of the Islands being tourism. In present day Malta, it is through English that this need is met, and it is universally accepted that English in Malta today serves an important function alongside Maltese, a view summarised by Camilleri (1992:21) as follows:

The Maltese language seems to fulfil all the nationalist needs for the Maltese people and English is mainly perceived as the language of education and a necessary tool for international communication.

English, however, is sometimes still regarded as a threat to Maltese. Evidence for this is the language debate which continues to flare up periodically. Lay opinions on the issue of language use by every "shaman" (Bolinger 1980) in the trade, are flung confidently about, the main local newspapers in English being the prime arena for the debate. The point in question nowadays concerns the use of Maltese and English rather than the supremacy or otherwise of one "foreign" language, Italian, over

another, English. That feelings regarding this issue run deep becomes immediately obvious upon a brief examination of any selection, however limited, of excerpts from such letters, the strong language of which is typical of the way views concerning this issue are expressed.⁵

Although it is important not to underestimate the importance of either the historical and political, or the social and psychological implications of the language debate, it is the consequences of the co-existence of Maltese and English on language use in Malta that is of interest here. In view of this, an outline of the ways in which Maltese and English are present in the external environment is presented in Section 1.2. This is followed in Section 1.3 by an examination of the language behaviour which results from the use of Maltese and English, in the context outlined in Section 1.2.

⁵ This is illustrated by the following excerpts from the "Letters to the Editor" section of the November 24, 1991 issue of *The Sunday Times* (Malta). The full text of the letters is given in Appendix A:

from a letter by A. Mizzi:

"However, I am afraid that the funny (or is it unclean?) connotation given by your correspondent is gratuitous. It rather betrays the aversion some people have for things Maltese, be it the sound of their own native language or just a toponymic curiosity of folkloristic value. And if as a nation we have quite a number of people who are ashamed of the very sound of their own mother tongue, then I should say that we are in a sorry mess indeed."

from a letter by P.P.Borg:

"A common denominator to these reasons may be the fact that 27-year-old Lady Independence-and-Identity has not yet been understood by some, whose minds still boggle (*sic.*) with colonial mentalities."

from a letter by F.Sammut:

"A cursory look at the columns of this paper will suffice to convince the *Akkademija tal-Malti* of the dire need there is to defend the dignity of the mother tongue against the insidious attacks of linguistic nonentities and the thoughtless tirades of common nincompoops."

Although Maltese in present day Malta is in regular use for most purposes, the situation is however not as straightforward as a statement to this effect might suggest. Something of the complexity of the situation should become clear following the outline given below of the linguistic environment as represented by the domains of administration, the media, education and the family.

1.2.1

Administration

The Constitution of the Republic of Malta does more than merely prescribe a role for English alongside Maltese in Malta (cf. 1.1 above). It also provides a number of guidelines for the use of language in administration. Thus, for example, while the language prescribed for use both within the Law Courts and during Parliamentary proceedings is Maltese, a ruling by Parliament is all that is needed to allow for the use of English in the Law Courts or to decide what language/s be used during parliamentary proceedings or for keeping records. Moreover, individuals have the right both to use either of the two official languages (Maltese or English) in addressing an administrative body, and to receive a reply in the same language as that used in their original address to that administrative body (*Constitution of the Republic of Malta* 1974). In the administrative sphere, in fact, Maltese predominates as the spoken medium. In spite of efforts on the part of Government to encourage more extensive use of written Maltese for administrative purposes, English remains more widely used in written communication.

1.2.2 The media

1.2.2.1 Television and radio

There are two Maltese television stations, *Television Malta* (TVM) and *Super One Television*, and a number of radio stations transmitting locally.

The habitual language of both TV stations is Maltese. A relatively large number of programmes are produced locally by and for both, and these are normally in Maltese. A large number of films and documentaries in English, be it British or American English, are also broadcast in the original. In view of the local linguistic context, both dubbing and subtitles are considered unnecessary.⁶ A late evening news summary in English (read by Maltese newscasters) is presented daily. Although neither TV station has morning transmissions of its own, both TVM and Super One Television retransmit selected excerpts from CNN and BBC television.

Besides the presence of English via local television, there is also the very significant presence of Italian as it is relatively easy to tune in to a whole variety of television channels operating from Sicily, as well as to the main stations operating from mainland Italy. The competition to TVM from such TV stations is extensive and results in what is a very wide viewership of Italian television.

⁶ The same can be said for films available on video and those shown in local cinemas, the range of which is in general similar to that of films available for general release in Britain.

A larger percentage of radio shows than television programmes are produced locally. A large majority of these shows, however, is music-oriented, so that in spite of their being presented in Maltese, such programmes generally consist almost entirely of current music from Britain and the United States (with lyrics in English), and to a lesser extent, European music, particularly Italian music which is very popular. The granting of radio licences to private individuals and companies has recently also resulted in radio stations such as the all-English *Radio Island Sound* and others such as *Bay Radio* and *Calypso* which air programmes in both English and Maltese, as well as an increased number of mainly-Maltese stations. Although phone-ins and interviews involving Maltese speakers of English feature frequently in such programmes, many of the individuals presenting these radio shows are foreigners residing in Malta who are native speakers of varieties of English other than the local one (cf. Subsection 1.3.2).

To conclude therefore, exposure, through the media, to various accents of spoken English, and to a lesser extent, to spoken Italian, is considerable for the average Maltese.

1.2.2.2 Reading material

Apart from two daily, five weekly and a fortnightly paper in Maltese, there is a daily newspaper in English, *The Times* (Malta), and two weekly papers, *The Sunday Times* (Malta) and *The Malta Independent*. Many households subscribe to one of the dailies and/or weeklies in Maltese. However, since these are all official publications of either

one or other of the political parties, bodies affiliated to them, or the Church, many turn to *The Times* especially, and either its Sunday equivalent *The Sunday Times*, or *The Malta Independent* for a more "neutral" coverage of news.

Popular magazines are mainly imported from Britain although a small number of titles are also imported from the Continent, mainly from Italy. English editions of some German publications such as the fashion magazine *Burda Moden* are also imported.

Although an increasing number of books are being written in Maltese, and a considerable number of foreign classics are being translated into Maltese (cf. for example recent translations of Homer's *Odyssey*, Xuereb 1989; and Dante's *La Divina Commedia*, Palma 1991), reading material in Maltese remains comparatively limited. This is especially true of reference material. A definite bias exists for works in Maltese to be mainly works of fiction (prose, drama and poetry) with works of a scholarly nature by Maltese writers frequently being written in English. A few attempts have been made at promoting the publication of bilingual versions of texts written by Maltese authors. To my knowledge, however, these attempts are restricted to examples of fairly basic reference material such as Baldacchino, Lanfranco and Schembri's *Appuntamenti man-Natura* (1990a), also published as *Discovering Nature in the Maltese Islands* (1990b).

It would seem therefore that the average Maltese person's exposure to written English is quite likely to be as extensive, and probably more so, than her or his exposure to written Maltese.

According to Brian Blouet (1967:177), the "fundamental problem" confronting educationalists in nineteenth century Malta was the issue of which language to base instruction on. The issue has continued to be problematic. In a strictly educational context, the availability of books in Maltese, text-books as well as otherwise (cf. 1.2.2.2), continues to be limited. The necessity for access to a language other than Maltese (which, at present, is English) is well acknowledged, not merely from the point of view of the use of such a language as a means of international communication both within and outwith the island (cf. discussion in particular Subsection 1.1.4, also 1.1.1), but also from the educational point of view. One of the main points of contention is not whether English should be used but rather when and how the "alien" language should be introduced.

English is introduced in all schools by age 6 at the latest, i.e. by the second year of primary schooling. Most state schools introduce Maltese first, and English some short time later. A number of schools, specifically many of the private (fee-paying) schools, introduce English before Maltese. Regardless of which language is introduced first, classroom instructions such as Stand up, Line up, Draw a margin, Underline the date, are often given in English. I have observed linguistic behaviour such as this in a number of schools, state as well as private, in different parts of the island. This suggests that even in cases where the shift to instruction through English never really takes place, some exposure to English is always present. (For detailed work on the language of instruction in Maltese schools cf. Camilleri 1993.)

Education at secondary level is characterised by the increasing need for recourse to English, especially written English. The main reasons for this are first of all, the fact that textbooks are in English in most subjects at secondary level (and above), and secondly the fact that most subjects are examined through English.

Until recently, students sat for British-based (mainly Oxford and London Universities') Ordinary and Advanced level exams in most subjects. The major exceptions to this were subjects such as Maltese, Italian, Maltese History and Religious Knowledge. Justification for the English-based models in terms of cultural and religious affinities in these cases would be, to say the least, rather tenuous. In these cases, the British-based exams were superseded in status by exams set by the University of Malta, both at School-leaving and at Advanced level. In some cases these local exams were originally set in both English and Maltese to be answered optionally in either of the two languages. The fact that textbooks for most subjects are in English, however, resulted in very few students opting to sit their exams in Maltese.

Long standing plans to implement locally-based exams in all subjects have recently come to fruition in the form of Ordinary level Secondary Education Certificate (SEC), Intermediate level Matriculation (IM), and Advanced level Matriculation (AM), exams. Apart from Religious Knowledge (It-Tagħlim Reliġjuż) at SEC level (examined optionally through English or Maltese) and Environmental Studies⁷ at SEC level (examined through Maltese), all subjects, including more practically-oriented subjects

⁷ Ironically, there is no Maltese equivalent for the subject title Environmental Studies in spite of the fact that this is one of the few SEC subjects examined through Maltese.

such as Home Economics, Needlecraft and Dress and Technical Design at SEC level, are examined through English. This also includes the language subjects (with the exception of Maltese, English and Italian which are examined wholly through Maltese, English and Italian respectively) which generally feature translations to or from English, and in some cases allow students to answer questions on literature in either the language being examined or English. Arabic at AM level is unusual in that it allows students to answer some questions in Maltese, as well as either Arabic or English.

Trade and technical school programmes sometimes prepare students for British exams such as City and Guilds. Thus, although the spoken medium of instruction in such schools is most likely Maltese, the written medium is nevertheless English.

English is the language of practically all reference material at tertiary level. Although it is doubtful whether lecture-time interaction is completely devoid of Maltese, English is also the predominant medium of instruction in the huge majority of subject areas at this level. The obvious exceptions as regards both written reference texts and the spoken medium of instruction are the various modern languages.

The above has highlighted the importance of English in the educational field, particularly in its written form, but also, to a lesser extent, as a spoken medium of instruction. The necessity of English for education strongly influences parents' decisions as to how best to prepare their child to face "life with two languages" (Grosjean 1982). This issue will be explored briefly in 1.2.4 below.

The above outline will have made it clear that the choice of language of the home is not straightforward. This is especially true in families where a child has a disability such as prelingual deafness which may hinder the child from learning a second language later in life. However, the question is an immensely loaded one in any case, with the result that a trend has emerged, noted, for example by Albert Borg (1986), for some well-intentioned parents to bring up their children with English as a first language. Thus, although Maltese is the first language of the majority of the Maltese in present day Malta, there is a small percentage of the offspring of Maltese parents whose first language is English (cf. for example Hull 1993). In such cases, the parents will often talk to each other in Maltese but to the children in English. This means that even those Maltese having English as their first language will have had exposure to Maltese quite early on. It is important to stress that, regardless of what the home environment is, it is practically impossible for a child to grow up in a strictly monolingual environment. For example, I have observed an incident in a particular Maltese-dominant household, of a mother at play with her child using the English nursery rhyme "Humpty Dumpty". In other words even in predominantly Maltese-based family environments, English cannot be considered completely "alien", even in the pre-school years when the influence of education and the media is at its lowest.⁸

⁸ It is interesting to note that acknowledgement of the gap in Maltese folk culture in this field has resulted in an increase in the availability of material in Maltese. However, the books and audio material in this genre do not quite match the richness of the hoard of nursery rhymes in the English-speaking tradition and consist mainly of songs and rhymes for playing games. In circumstances where a gap is in evidence in the tradition of the mother tongue, the linguistic environment is quite tolerant of recourse being made to material from other traditions. In support of this, Fenech (1977:32-33) examines the following three nursery rhymes which he suggests are semantically related to the father's return from work. The first of the three nursery rhymes is in Maltese, the second in English and the third in Italian:

As portrayed above the situation might appear to be one involving a straightforward dichotomy between Maltese or English as a first language, with influence in the former case from English, in the latter from Maltese. The situation is however not so straightforward. Camilleri (1992:16-17) in fact distinguishes between four family types in terms of different patterns of language use in the family environment. The figure outlining the four family types she proposes is reproduced below:

| <i>FAMILY TYPE</i> | <i>Languages Acquired (in chronological order)</i> |
|-----------------------------------------------------------|----------------------------------------------------|
| <i>A</i> | 1. Dialect 2. Standard Maltese 3. English |
| <i>B</i> | 1. Standard Maltese 2. English |
| <i>C</i> | 1. Standard Maltese and English |
| <i>D</i> | 1. English 2. Standard Maltese |
| <i>TABLE 1.1 Languages acquired in different families</i> | |

Banni bannozzi,
Ġej il-Papà, ġej,
Bil-pastizzi tal-ġabbtejn!
Kollox għal Jimmy
W għal Mary xejn!

Clap hands, clap hands,
Till Daddy comes home:
Sweets for his baby,
And baby alone!

Batti le mani!
Viene Papà:
Ceicia porterà!

According to Fenech, the existence of what he calls a "multilingual nursery rhyme", (apparently the case he quotes is not an isolated phenomenon), gives an indication of the relatively early influence on the Maltese child from languages other than Maltese.

Camilleri clearly believes that for those of Maltese parentage, a Family Type C situation, in other words one in which a "mixture" of Standard Maltese and English is acquired as a first language, is a more likely possibility than a Family Type D situation in which English is the language acquired first, Maltese being acquired later "formally at school and through socialization with Maltese speakers" (Camilleri 1992:17).

Camilleri echoes preoccupations expressed in a number of sociolinguistic studies over the emergence and spread of a variety consisting precisely of the "mixture" of Standard Maltese and English acquired in the Family Type C situation (cf. for example Borg, Albert 1986; Spiteri 1988). It emerges from these studies that there is an increasing concern amongst linguists (a concern which, as can be seen from the selection of letters from the "Letters to the editor" section of *The Sunday Times* in Appendix A, is shared by non-linguists) that this mixed variety may become the mother tongue of an increasing section of the population.

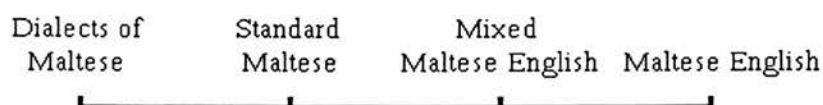
Over the past few years, some of the issues which arise from observations such as those discussed above have led researchers to coin the label Mixed Maltese English, and to distinguish this from Maltese English (cf. 1.3 below). Mixed Maltese English seems to be what results in a Family Type C where the variety acquired consists of a "mixture" of Standard Maltese and English, while Maltese English is the English acquired by children of Maltese parentage in a Family Type D. Thus, it appears that while Maltese and English are both present in most family environments, English is often present in the form of the mixed variety Mixed Maltese English (Family Type

C) rather than as a discrete entity (Family Type D). In view of the importance of the early years in every child's life in laying down the foundations for its continuing development, linguistic as well as otherwise, there is no doubt that language behaviour is affected by the presence of this mixed variety in the home environment.

It is possible to put influences such as those from the external environment outlined in 1.2.1 through to the above into perspective by describing language behaviour in Malta in terms of a continuum of language use (cf. for example Borg, Albert 1986). The use of such a continuum in Section 1.3 is followed by a discussion of its strengths as well as limitations as a tool for describing language such as the sample presented in Subsection 1.3.1. It also provides a framework both for the working definition of Maltese English I provide in 1.3.2 and for the outline of the method used for the collection of Maltese English data in 1.3.3.

It is not uncommon in the case of interaction between people aware of each other as having access to two codes, for apparently indiscriminate, even if, as some researchers have tried to show, rule-based, switching between the one code and the other to occur (cf. for example Nishimura 1986). The Maltese situation is no exception in this regard. In fact, while the Maltese are generally acknowledged to be bilingual to varying degrees (cf. for example Azzopardi 1981), various reports are also available of code-switching between Maltese and English in their speech (cf. for example Ellul 1978; Borg, Albert 1980, 1986; Darmanin 1989). The term Maltese English as first used by Broughton (1976) to refer to the English which could be considered a reasonable target to aim for in the teaching of English in Maltese schools, was found by researchers in the field to be inadequate for describing language use. It was in response to this inadequacy that the label Mixed Maltese English was coined (cf. Subsection 1.2.4).

Albert Borg (1986) proposes a continuum of language use involving dialects of Maltese at one end followed by Standard Maltese, Mixed Maltese English, and Maltese English. The continuum can be represented schematically as follows:



Continuum of language use

The continuum is characterised by a decrease in the influence of non-adjacent points on each other, as compared to adjacent points and as such provides a useful representation of decreasing influence from Maltese on Maltese English as compared with Mixed Maltese English.

1.3.1 Language in use: a sample conversation

The following excerpt from a conversation at a family gathering in a household in which all of the adults concerned could be considered bilingual, will serve to illustrate the kind of language behaviour involved.⁹

-
- | | | |
|-----|----|---------------------------------------------------------------------------------------------------------|
| 1 | L: | He died? |
| 2 | V: | Miet žgħir miskin. <i>he-died young poor-man</i> ¹⁰ |
| 3 | A: | Not long ago. Last year he died. |
| 4 | V: | In his forties. |
| 5i | G: | In his forties?! |
| 5ii | | Mela dik "in her forties"! <i>as-if that-one (is)</i> |
| 6 | M: | Hux forties. <i>not</i> |
| 7 | A: | U le pa, x' eżagerazzjoni! <i>and no dad what (an)-exaggeration</i> |

⁹ The extract from the conversation in question can be found on the accompanying cassette.

¹⁰ Where provided, glosses are presented in italics.

- 8 G: Iddaħħaqni int.
you-make-me-laugh you
- 9 M: X' forties forties!
what
- 10 G: Mela....mela t- tifla tiegħu kienet!
as-if....as-if the daughter his she-was
- 11 A: She's older?
- 12 M: Fifties, fifties!
- 13 A: She's over fifty?
- 14 G: Of course she's over fifty.
- 15 A: Well in her...well in her fifties, she's nearly sixty, I'm sure.
-

Of the 15 turns involved in the above extract, 2, 7, 8 and 10 are in Maltese; 1, 3, 4, 5i and 11 through 15 involve use of English; the remainder consist of Maltese and English combined to different extents and in a number of different ways. The presence or absence of Maltese lexical items in a stretch of speech otherwise involving English is frequently used as a criterion for distinguishing Mixed Maltese English from Maltese English. For example, according to Camilleri (1992:18) there is a clear "cut-off point between the two varieties" which occurs at the point where no Maltese lexical items are present in a particular stretch of speech. Such a claim makes it possible to classify the structures in Turns 5ii, 6 and 9 above, structures which all involve a "mixture" of Standard Maltese and English, as Mixed Maltese English; those structures identified earlier as involving solely English can be classed as Maltese English.

Distinguishing between Mixed Maltese English and Maltese English solely in terms of the presence or absence of Maltese lexical items, while useful in its way, muddies the waters somewhat. For example, the absence of Maltese lexical items in structures such as Last year he died. in Turn 3 and She's over fifty? in Turn 13 results in the two structures being classed together as instances of Maltese English when in fact the influence from Maltese in these cases is different. More specifically, both these examples are interesting from the point of view of their intonation. However, while the preposing of last year to he died in the former of the two structures is clearly reminiscent of Maltese constituent structure (cf. 2.1.3), there does not appear to be any influence from Maltese syntax in the latter case. In other words, while the similarity between the intonation of the former of the two structures and a possible Maltese equivalent Is-sena li għaddiet miet. 'It was last year that he died.' can be seen to correlate with a corresponding influence at the level of syntax, the influence of Maltese in the latter case can be seen to be purely one of pronunciation.

Differences in the influence of Maltese in examples such as those discussed above can readily be accounted for by situating the examples in the region along the continuum between Mixed Maltese English and Maltese English without getting involved in the minutiae of differentiating between Maltese English which is more or less heavily influenced by Maltese at the various levels of structure. I assume that there is a decrease in influence from Maltese at levels other than the phonetic and phonological the closer one gets to the point on the continuum labelled Maltese English.

Like Azzopardi (1981) I assume that the English spoken by speakers of Maltese has phonetic and phonological characteristics which can be identified with a reasonable amount of explicitness. I also assume that these characteristics can be identified irrespective of whether that English forms part of a stretch of utterance which would be classified as Mixed Maltese English or whether it is classified as Maltese English. However, in order to be better able to home in on some of the phonetic and phonological characteristics of Maltese English, I limit myself in this work to examining structures which deviate from other Englishes mainly in terms of pronunciation ("accent" differences, cf. for example Hughes and Trudgill 1987). My working definition of Maltese English is therefore as follows:

Maltese English is that English which is influenced by Maltese mainly at the levels of phonetics and phonology and minimally at the levels of syntax, morphology and lexis.

From recordings of speakers who purported to use English as their main means of communication (cf. for example the extract from the family conversation discussed in Subsection 1.3.1), it was apparent that in order to collect data in which the minimum of code-switching took place, the communicative situation would have to be constrained in some way. On the other hand, because of the sociolinguistic and other factors involved (cf. earlier discussion in particular that in Section 1.3 above), studio

recordings of made-up utterances were not suitable. The method adopted involved the introduction into the situation, of a speaker of Standard English, whatever the variety, who was known to the other speaker/s not to be conversant with Maltese. In deference to that speaker, Maltese speakers will almost invariably accommodate to the situation and interact in English.

The source of the Maltese English data is a corpus collected during completion of eight Map Tasks. The general method adopted for the collection of Map Task data is as outlined in Anderson et al. (1991). Two participants, an Instruction Giver (G) and an Instruction Follower (F), take part in each Map Task. Both participants are provided with a map, but while G's map has a route marked on it, F's map does not. A number of landmarks on the maps are shared while a few are unshared. The aim of the Task is for F to follow G's instructions for mapping out the route. Four maps, each used by two pairs of speakers, were utilised. Since my aim in collecting this data was to obtain as much Maltese English data as possible, the speakers of Maltese English took the G role in all but one case while the speakers of Standard English adopted the F role. In all cases a screen separated the speakers during the recording session. The original Map Task corpus design variables of familiar/unfamiliar partner and first/second map giving were not varied. Laryngograph recordings of the Maltese English speakers were made as well as audio recordings of all the speakers.

The resulting data is markedly devoid of code-switching as compared to data from more informal situations (cf. Appendix Bi for a sample transcription of one of the eight Map Tasks, that involving Speaker 5). In the whole corpus I note only three

instances of code-switching into Maltese, one of which is an abandoned beginning x, of the item in question xi meaning 'about' (cf. sample transcription in Appendix Bi, line 56), while the remaining two consist of a connecting item u, 'and', used as a filler (Speaker 4), and an expletive boq (Speaker 1). The success of this method in eliminating instances of code-switching becomes obvious when comparison is made of the Map Task involving Speaker 5 (cf. Appendix Bi) with an informal home recording involving this same speaker, another speaker of Maltese English and a speaker of Standard English (excerpts from this recording are appended for comparison as Appendix Bii at the end of the sample Map Task transcription involving Speaker 5).¹¹ Speaker 5 code-switched continuously in the quasi-free setting of the home recording. In the more constrained Map Task situation, on the other hand, Speaker 5's only instance of code-switching consists of the abandoned item mentioned above.

The usefulness of the Map Task as a tool for collecting Maltese English data cannot be overstated. The method used for collecting the data minimised interference from Maltese at the syntactic, and especially at the morphological and lexical levels, sufficiently well to make it possible for attention to be focused on the phonetics and phonology of Maltese English.

¹¹ Recordings of the two excerpts are included on the accompanying cassette.

Chapter 2

STRUCTURAL SKETCH OF MALTESE AND MALTESE ENGLISH

2.1 Maltese and Maltese English: grammatical considerations

The close interrelatedness of intonational and non-intonational structure in the expression of grammatical meaning necessitates that a brief introduction to some of the non-intonational characteristics of both Maltese and Maltese English be given.

This section concentrates on some morphological and syntactic elements of Maltese grammar. It must be pointed out that, despite the relatively small number of speakers of the language, Maltese is not a single homogeneous entity (cf. for example Borg, Albert 1986, 1988). Evidence of dialectal variation at the morphological and syntactic levels is available in a number of studies (cf. for example Camilleri 1987). The description provided here, however, is based on accounts of Standard Maltese such as those in Sutcliffe 1936, Albert Borg 1981, 1988. Other accounts of the morphology and syntax of Maltese include Cremona 1938 and Mifsud 1992.

A number of studies dealing with aspects of the morphology and syntax of Maltese English have been carried out (cf. for example Navarro and Grech 1984; Spiteri 1988). The influence of Maltese on Maltese English at the grammatical level cannot be discounted. In view of the fact that the corpus of Maltese English being looked at in this work comes very close to Standard English at this level of description (cf.

Section 1.3, particularly Subsection 1.3.1), however, it is left to the reader to draw inferences from the description in this section as to possible sources of interference from Maltese at the grammatical level.

2.1.1 Notes on elements of Maltese grammatical structure

2.1.1.1 The form of the verb

The Maltese verb has two tenses, imperfect and perfect. (For a detailed study of the aspectual, as well as temporal, character of the Maltese verb cf. Borg, Albert 1981.)

The relevant paradigms for the verb *ħareġ*¹³ 'to go out' are given in Table 2.1 below.

| Personal Pronoun | | | <i>Imperfect</i> | <i>Perfect</i> |
|------------------------------------------------------------|----------|----------|------------------|----------------|
| 1st | singular | (jien/a) | noħroġ | ħriġt |
| 2nd | singular | (int/i) | toħroġ | ħriġt |
| 3rd masculine | singular | (hu/wa) | joħroġ | ħareġ |
| 3rd feminine | singular | (hi/ja) | toħroġ | ħarġet |
| 1st | plural | (aħna) | noħroġu | ħriġna |
| 2nd | plural | (intom) | toħroġu | ħriġtu |
| 3rd | plural | (huma) | joħroġu | ħarġu |
| TABLE 2.1 <i>The Form of the Verb in Maltese</i> | | | | |

¹³ The orthographic symbol for the glottal fricative /h/ is *ħ*, while orthographic *gh* and *h* represent what Azzopardi (1981:16) refers to as "phonetically non-existent consonants". The phonemic distinction between the affricate /tʃ/ and the stop /g/ is represented orthographically by the symbol *ġ* as opposed to *g*. Similarly, the fricative /z/ is distinguished from the affricate /ts/ by means of orthographic *ż* as opposed to *z*. Other orthographic symbols worth noting are *ċ* (no corresponding *c*) for /tʃ/, *għ* for the glottal stop /ʔ/ and *x* for the fricative /x/.

Maltese is a pro-drop language. In general the subject of the verb in Maltese is understood in the form of the verb. Except for equivalence between the 2nd person singular and the 3rd person feminine singular of the imperfect, and between the 1st and 2nd persons singular of the perfect, there is no ambiguity in the paradigms and little possibility of ambiguity in context. Fabri (1993) claims that subject agreement affixes are pronominal. He also argues for their having affix status. In his account pro-drop is interpreted as resulting from a saturation of the relevant argument by these subject agreement affixes. If an explicit subject occurs it is co-indexed with the agreement affix, and, in his analysis, is considered a topic.¹⁴

The negative is formed by means of ma preceding the verb and the negative particle x following and attached to the verb, thus for example, ħarġet - ma ħarġitx. The final vowel of the verb is subject to alternation in some cases, especially e~i as in the above example, but not in others, for example, telqu 'they left' - ma telqux 'they have not left' and ħobb 'she likes' - ma ħobbx 'she does not like'.

2.1.1.2 The definite article

Maltese has a definite article il- but no indefinite article. Il- takes the form l- preceding a noun beginning with a vowel such as ikel 'food', thus l-ikel. Final /l/ of the definite article (as well as that of certain preposition + article constructions such

¹⁴ A similar claim is made by Sanfilippo (1990) with regard to subject agreement inflection in Italian, Sanfilippo's conclusion differing from Fabri's only with respect to the former's analysis of subject markers as clitics rather than affixes (but cf. Subsection 2.1.1.4 for more on the distinction made by Fabri between subject affixes and object clitics).

as bil-, bi + il- 'with the') is assimilated to initial coronal consonants, in the context of following nouns beginning with all such consonants with the exception of /ʃ/, thus for example, il-pizza 'the pizza' and il-ġnien 'the garden', but in-Nannu 'Grandfather' rather than *il-Nannu.

2.1.1.3 Adjectives

Adjectives in Maltese generally follow the noun which they modify and agree with it in gender and number, for example pizza kbira (*a*) *pizza large-(fem)* 'a large pizza'. Albert Borg (1981:27 following Sutcliffe 1936:36) also notes that the modifying adjective can also be preceded by the article in some cases, thus il-pizza l-kbira *the pizza the large-(fem)* 'the large pizza'. The adjective in the former of these two examples has what Sutcliffe (1936:36) refers to as a purely "descriptive" function while that in the latter of the two examples is used in "identifying the object named".

2.1.1.4 Pronominal affixation

Albert Borg (1981:29-30) notes that "pronominal suffixes can be affixed to both verbs and prepositions (and to certain subclasses of nouns in certain cases)". Thus for example the pronominalised version of Kiel il-pizza. 'He's eaten the pizza.', Kielha 'He's eaten it.', can be resolved into component parts as follows: verb stem kiel + feminine direct object pronoun ha. Albert Borg (1981:30) explains the pronominalised version of an example such as Kiel il-pizza ta' Marija. 'He's eaten Marija's pizza.', Kielhielha. 'He's eaten it.' as follows:

In the case of an indirect object, this can be pronominalised and suffixed to the verb. When this happens, the preposition lil, which occurs before the direct object, is abbreviated to (i)l and suffixed along with the pronoun.

The above example can be resolved as follows: verb stem kiel + a feminine indirect object pronoun hie + prepositional affix l + feminine direct object pronoun ha.

As noted earlier, Fabri (1993), unlike Borg, assumes subject as well as object markers to be pronominal. He distinguishes object markers from their subject counterparts, however, by arguing that the former have clitic rather than affix status (cf. Subsection 2.1.1.1). His argument is based on the fact that while the presence of an object does not assume that of an object clitic, the presence of an explicit subject does assume that of a co-indexed subject affix. In Fabri's account, an object co-indexed with the appropriate object clitic is considered a topic.

2.1.2 Sentence types

The sentence in Maltese consists minimally of a verbal component, the subject of which is usually understood from its form (cf. Subsection 2.1.1.1). In view of the facts noted earlier about Maltese verbal morphology and subject affixation, the subject position can be seen to be filled by the subject agreement affix even in the absence of an explicit subject (Fabri 1993).

Verbless sentences are also possible in Maltese (cf. Borg, Albert 1981:28-29 who follows Lyons 1977 in distinguishing between equative predications, ascriptive

predications and predications of location). An example of such a verbless sentence is In-Nannu Karmenu. *the Grandfather (is) Karmenu* 'Grandfather is Karmenu.'. Interpreted as an equative predication, this example could be used in a context in which Grandfather is identified as the man called Karmenu. Ambiguity with an alternative possible interpretation as corresponding to a shortened version of (Dan (hu)) in-Nannu Karmenu. *this is the Grandfather Karmenu* '(This is) Grandfather Karmenu.', which might occur in a context involving the introduction of Grandfather Karmenu to the company present, does not arise since the two readings are prosodically distinct.¹⁵

2.1.2.1 Yes-no questions versus declaratives

As in many languages, no specific morphological or syntactic device is available in Maltese for signalling yes-no questions. A question such as Ħarġet? 'Has she gone out?', can therefore be differentiated from the declarative alternative Ħarġet. 'She went out.', only by means of its intonation.

2.1.2.2 Question word interrogatives

A number of question word interrogatives are available in Maltese. Examples include

¹⁵ Cf. Subsection 4.4.1 for discussion of a third, related, interpretation, that involving Karmenu used as a vocative in In-Nannu, Karmenu.

Xi 'What?' as in Xi trid? 'What do you want?' or its shortened form X as in X'ridt? 'What was it you wanted?', Meta? 'When?', Fejn? 'Where?', Għaliex? 'Why?'. Maltese, like many other languages, allows the possibility of WH-movement, thus Kielet pizza. she-has-eaten (a) pizza 'She's eaten a pizza.' but X'kielet? what she-has-eaten 'What has she eaten?'.

2.1.2.3 Tag questions

The function of the basic positive tag in Maltese is carried out by one of two forms: these are either a form consisting of the pronoun hu functioning as verbal copula, for example, Kiel, hu? 'He's eaten, has he?', or one consisting of the negative particle x, affixed as in the formation of the negative to the pronoun hu functioning as verbal copula, thus, hux, for example, Kiel, hux? 'He's eaten, has he?'. Alternative positive tags are hux hekk, hux tassew, hux veru.

The function of the basic negative tag, on the other hand, is carried out by a form consisting of the m from ma as in the formation of the negative followed by the pronoun hu as for the positive tags and a final negative particle x, thus mhux. Mhux never occurs alone but only in combinations such as mhux hekk for example Kiel, mhux hekk?, 'He's eaten, hasn't he?', also mhux tassew and mhux veru.

Positive as well as negative tags in Maltese can be used either to retain the polarity of the main sentence regardless as to whether this is positive or negative, thus, for example Kiel, hux? or Ma kielx, mhux hekk? (constant polarity), or to change the

polarity of the main sentence as for example in Kiel, mhux hekk? or Ma kielx, hux hekk? (reverse polarity).

2.1.3

Constituent order, discourse structure and focus

Despite the lack of empirical work regarding this issue (or because of it), constituent order in Maltese has usually been characterised as being free. However, as Siewierska (1988:1) points out:

Although many languages exhibit considerable variation in major sentence constituent order, and the order of constituents in some has even been characterised as syntactically free, it is commonly acknowledged that no genuine free word order language exists.

Borg, Albert (1988:117), whose intuitions are based on his own Standard variety of Maltese, reports only one of the six logical constituent order possibilities for the sentence It-tifel laqat il-kelba. 'The boy hit the dog.' (cf. Table 2.2) as unacceptable.

| | |
|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|
| SVO | It-tifel laqat il-kelba. |
| SOV | It-tifel il-kelba laqat. |
| VSO | *Laqat it-tifel il-kelba. |
| VOS | Laqat il-kelba t-tifel. |
| OSV | Il-kelba t-tifel laqat. |
| OVS | Il-kelba laqat it-tifel. |
| <div> <div>KEY</div> <div> it- tifel il- kelba laqat the boy the dog-(fem) (he)-hit </div> </div> | |
| <div>TABLE 2.2 Constituent Order in Maltese</div> | |

A more accurate description therefore, is probably one of "variable" constituent order. Albert Borg (personal communication) believes that although constituent order in Maltese has so far been characterised as being free, this may not be a totally accurate characterisation. He suggests that there exist two or three canonical orders with the possibility of topicalisation giving the semblance of free constituent order. Albert Borg also (1988:123) concludes that intonation and other factors such as pausing play an important role in differentiating between the various possibilities.

The issue of variable constituent order in Maltese is examined in greater depth by Fabri (1993). In the light of his interpretation of subject affixation and pro-drop (cf. Subsection 2.1.1.1), he concludes that "there is no fixed subject position" (Fabri 1993:141, my translation). As regards the object, on the other hand, Fabri concludes that the unmarked case is that in which "the verb and its complement form a constituent in which the direct object has to be adjacent to the verbal head" (Fabri 1993:140, my translation; cf. also Subsection 2.1.1.4). With the exception of *VSO, which order, like Borg, he considers to be unacceptable¹⁶, Fabri concludes that constituent order in cases involving a topic subject is completely free. In his account, SVO and VOS constituent order sentences (in other words those orders in which VO is a constituent) are taken to be unmarked; SOV, OSV and OVS constituent order sentences without an object clitic, in other words orders in which VO is not a constituent, on the other hand, are taken to be marked. Fabri (1993:140) argues that a contrastive effect is implicit in sentences having a marked order of constituents so

¹⁶ As noted below, however, Fabri differentiates between the *VSO without-direct object (dO) clitic-order which is unacceptable and the acceptable V+dO cliticO order.

that, for example, the SOV sentence It-tifel il-kelba laqat. is similar in effect to a sentence such as It-tifel il-kelba laqat, mhux 'l ħuħ. 'It was the DOG the boy hit, not his brother.' in which the contrast is made explicit. The contrastive effect, Fabri claims, "is achieved by means of the left-dislocation of the direct object from its unmarked position to the right of the verb head within the VP". Fabri explains the unacceptability of VSO structures such as *Laqat it-tifel il-kelba. as being due to a constraint on dislocation in Maltese, this being limited to left-dislocation.

Further to the above, Fabri also points out that, in sentences in which an object clitic is present, constituent order is completely free. Thus, all six constituent order possibilities of an SV+dO cliticO such as, building on Borg's example illustrated above, It-tifel laqatha l-kelba., are acceptable in this case. Moreover, there is no contrastive effect in any of the resulting sentences in this instance.

Like Borg, Fabri notes that the syntactic possibilities correlate with differences in intonational structure.

The interaction of prosodic factors with constituent order noted by both Albert Borg and Fabri for Maltese, is widely acknowledged in work on discourse structure. Such work suggests that there is an "unmarked" order of elements in most languages (cf. for example Couper-Kuhlen 1986:127) and that this generally involves given information preceding new information.¹⁷ Moreover, it is also generally assumed that,

¹⁷ Gussenhoven (1983:14) discusses the use in the literature of near alternative pairs such as Given Information versus NEW INFORMATION, Theme versus RHEME, Topic versus COMMENT; also ± FOCUS and Deaccenting. In view of the inconsistency with which the various terms have been used, my

by virtue of the relatively greater importance of the new, as compared with the given, information, it is the former which is assumed to serve as the location for the sentence stress which carries the main or nuclear intonational movement (cf. for example Daneš 1967:508).

As Bolinger (1972) so forcefully points out, the grammar of accent placement is far from straightforward even in languages such as English which, unlike Maltese and many other languages, exhibits very little freedom of constituent order possibilities. In spite of this, however, the predominance of work on English has given rise to what Bolinger (1986:49) calls "the principle of last-heard-best-noted" according to which "the last accent of the utterance - the one that tends to gravitate towards final position is usually regarded as the most important one". Maltese, and probably other languages characterised by variable constituent order such as Russian also single out the new information intonationally irrespective as to whether it occurs in final position or not, with the result that the main intonational movement falls finally only in utterances in which the new information also occurs finally. The shifting of the new information, and hence of the main intonational movement it carries, to earlier positions in the respective sentences, has implications both in terms of prosodic structure and intonation, implications which will be explored in detail in later chapters (cf. particularly Chapter 4).

To return to Borg's examples quoted above, the main intonational movement falls on il-kelba (new information) in all the acceptable versions of the SVO sentence

choice of terminology is in general determined by that of the original usage.

discussed. As we may recall, Fabri analyses the object in the various constituent order possibilities of SV+dO cliticO sentences as a topic. The main intonational movement in the various possibilities of the counterpart SV+dO cliticO sentences consequently falls on the V+dO clitic laqatha (new information) rather than on the object (given information). It appears therefore, that regardless of what the syntactic and/or morphological means used to bring about changes in discourse structure, the main intonational movement in Maltese **does** fall on the new, rather than the given, information. It is also true that sentences in which the given information precedes the new are unmarked. As a result of constituent order variability, however, an order of elements involving given information following, rather than preceding, new information, is common in Maltese. Cases involving a new-given structure are always intonationally marked but it is important to note that the intonational markedness which results is only matched by semantic markedness ("the contrastive effect" mentioned above) in cases analysed by Fabri as involving a dislocated object, for example, It-tifel il-kelba laqat.

The above account of constituent order variation has referred only briefly to the contrastive effect of certain marked constituent orders in Maltese, the discussion in general being limited to effects of constituent order variability other than those involving contrastivity. In so doing, an assumption regarding what has often been referred to in the literature as "normal" as opposed to "contrastive" stress (for a detailed critique of which cf. Ladd 1980; also Gussenhoven 1983) is invoked. Alternative "contrastive" versions of many of the examples illustrated above are also possible however. A brief discussion of some such possibilities follows with a view

to gaining an understanding of the asymmetries that exist with regard to the contrastive effect resulting from marked constituent order as compared with that resulting purely from an increase in emphasis.

To begin with, it is possible for the main intonational movement of, for example, different versions of the SVO sentences discussed earlier **not** to fall on il-kelba.¹⁸ For example, it is possible to have alternative versions for the unmarked SVO sentence It-tifel laqat il-kelba, with increased emphasis (indicated by means of CAPITALS) earlier in the sentence than on il-kelba, thus, IT-TIFEL laqat il-kelba, (*mhux it-tifla*). 'It was the BOY who hit the dog, (not the girl).' and It-tifel LAQAT il-kelba, (*mhux ziegħel biha*). 'The boy actually HIT the dog, (not petted it).' A third alternative for the sentence is also possible, this time with increased emphasis on IL-KELBA, thus It-tifel laqat IL-KELBA, (*mhux 'l ħuħ*). 'It was the DOG the boy hit, (not his brother).'

Assuming a definition of **focus** as in Gussenhoven (1983), it is specifically IT-TIFEL, LAQAT and IL-KELBA respectively that are [+focus] in the examples with increased emphasis and it is this [+focus] element in each case which carries the main intonational movement. In the case of the unmarked SVO example It-tifel laqat il-kelba, it is the whole sentence that is [+focus]. The main intonational movement falls on "the rightmost accentable item of the focus constituent" (Ladd 1980:77), il-kelba. The notion of focus makes it possible to distinguish what Ladd (1980:77) refers to as the "narrow focus" readings "identified by the placement of accent", from their

¹⁸ Fabri (1993) does note, however, that constituent order variation is severely restricted in constituent order sentences other than SVO ones in which the subject is a focus, rather than a topic, subject.

"normal stress" counterparts in which "the focus constituent is the whole sentence".

The relationship between the domain of focus and the location of the sentence stress which carries the main intonational movement (indicated as *) is shown below for the emphatic and non-emphatic versions respectively of the SVO sentence:

*
IT-TIFEL laqat il-kelba.
 [+focus]

*
It-tifel LAOAT il-kelba.
 [+focus]

*
It-tifel laqat IL-KELBA.
 [+focus]

*
It-tifel laqat il-kelba
 [+focus]

It was earlier noted that a contrastive effect is implicit in sentences having a marked order of constituents. This effect was discussed with reference to the SOV sentence It-tifel il-kelba laqat. The contrastive effect in this marked order sentence would appear to be similar to that resulting from an increase in emphasis on IL-KELBA in the SVO sentence It-tifel laqat IL-KELBA, discussed in the preceding paragraph. In fact, it is once again the element il-kelba which is [+focus], thus:

*
It-tifel il-kelba laqat
 [+focus]

Like It-tifel laqat IL-KELBA, the SOV sentence represented above has narrow focus

on il-kelba and, in this respect, both sentences differ from the normal stress SVO sentence It-tifel laqat il-kelba. The SOV example differs from the SVO example with narrow focus on IL-KELBA, however, in that while the effect of contrast in the former case is brought about by syntactic as well as prosodic means, prosody alone is responsible for the effect of contrast in the latter case. Interesting asymmetries at the intonational level between sentences such as the emphatic SVO and SOV sentences illustrated above also exist but will not be explored in this work (cf. however the brief mention in Section 4.1). It appears in fact, that a distinction can be made between the contrastive effect resulting from marked constituent order and that resulting purely from an increase in emphasis. Unless otherwise stated, I will be dealing only with the prosodic structure and intonation of normal focus as compared to that of narrow focus brought about by constituent order changes.

It was mentioned earlier (cf. Section 2.1) that a number of dialects of Maltese have been identified. Although aspects of the phonetics and phonology of some of these dialects have been described (cf. for example Aquilina and Isserlin 1981; Sciriha 1986), the available descriptions concentrate in the main on segmental phenomena. However, Albert Borg (1988:4) also suggests that "across dialects, substantial differences exist as regards sentence intonation" (my translation). In view, both of the avowed existence of differences between Standard Maltese and dialects of Maltese even at the level of intonation, and of the fact that the principal works on the phonetics and phonology of Maltese to date (cf. for example particularly Azzopardi 1981; also Aquilina 1959), are based on Standard Maltese, the present investigation is also limited to Standard Maltese.

2.2.1

The segmental make-up of Maltese

In what follows, I briefly summarise facts about the segmental phonetics and phonology of Maltese which I consider useful as background to the review of work on stress in Maltese in Subsection 2.2.2 in particular, but also to the notes on selected segmental as well as non-segmental characteristics of Maltese English in Section 2.3.

Phonemic inventories for the vowels and diphthongs in Maltese and for Maltese consonants are as in Azzopardi (1981). These are shown below in Figures 2.1, 2.2



and 2.3 respectively.¹⁹

The relative auditory qualities of the Maltese vowels with reference to the Cardinal Vowel chart as in Azzopardi (1981:90) are shown in Figure 2.1.

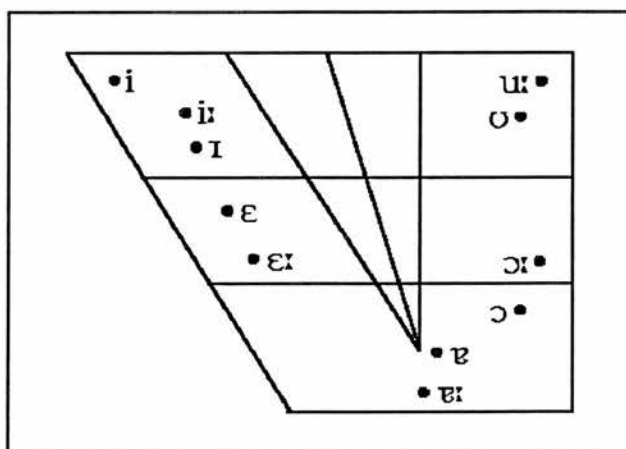


Figure 2.1

It is important to emphasise that unlike others before her, in particular Aquilina (1959), Azzopardi (1981:110) concludes that the Maltese vowels are qualitatively as well as quantitatively distinct, thus:

The qualitative distinction in Maltese between /I/ and /i:/ (and /i/), /ε/ and /ε:/, /e/ and /e:/, /ɔ/ and /ɔ:/ and /ʊ/ and /ʊ:/ is closely related to the durational difference but not limited to it.

Azzopardi (1981:88) points out that she finds use of the diacritic : to denote longer

¹⁹ In this thesis, references to Azzopardi (1981) in both the text and the figures presented employ notation which represents a modified version of that in Azzopardi (1981). This is so even in instances involving direct reference to Azzopardi (1981).

duration satisfactory only "as long as this does not entirely rule out a qualitative difference". This clarification is crucial to the interpretation of the notation she uses since, although length is phonemic in all cases, there is a three-way distinction between /i i and i:/ which is not solely length-related. Some examples of contrasting minimal pairs involving the vowels are given below:

| | | | | | | |
|--------|------------------------------|---------|-----|---------|-------------|-----------|
| 'skitt | 'I shut up' | /'skɪt/ | vs. | 'skiet | 'quiet' | /'ski:t/; |
| 'temm | 'he ended' | /'tɛm/ | vs. | 'teghem | 'he tasted' | /'tɛ:m/; |
| 'ghan- | 'for the ____' ²⁰ | /'ɛn/ | vs. | 'ghan | 'aim' | /'ɛ:n/; |
| 'flok | 'vest' | /'flɔk/ | vs. | 'flok | 'instead' | /'flɔ:k/; |
| 'kull | 'every' | /'kʊl/ | vs. | 'kul | 'eat' | /'ku:l/. |

These examples bear out the fact pointed out by Azzopardi (1981:113) that, "in a monosyllable, a short vowel is usually followed by a long consonant whereas a long vowel is followed by a short consonant". The only exception to the above observation occurs in examples involving the contrast between /i/ and /i:/ as in the following minimal pair:

| | | | | | | |
|--------------------|-----------|----------|-----|---------------------|---------------|----------|
| 'h _z in | 'storing' | /'hzi:n/ | vs. | 'h _z ien | 'it worsened' | /'hzi:n/ |
|--------------------|-----------|----------|-----|---------------------|---------------|----------|

An analysis of Maltese syllable structure is beyond the scope of this work. However, viewed from the point of view of the minimal syllable, the facts about closed Maltese monosyllables noted above throw light on the issue regarding the phonological status of /i/. Except in the case of /i/ in h_zin 'harvesting', a minimal rime structure for closed

²⁰ Ghan- is an assimilated preposition + article construction, ghal + il- 'for the', as for example in a phrase such as rigal ghan-Nanna 'a present for Grandmother'.

monosyllables in Maltese can be suggested. This is of either a VVC structure (where VV represents a long vowel and C a consonant) or a VCC one (where V represents a short vowel followed by a sequence of two consonants, specifically, in this case, a geminate). If, as is quite plausible to assume, the minimal rime structure in the case of ħzin is the same as for other monosyllables, it must be assumed that the vowel /i/, like the vowels /i: ɛ: ɐ: ɔ: and u:/ is phonologically long. Phonemic length is therefore contrastive in all cases barring that involving the contrast between /i/ and /i:/.

A tendency worth noting, since it potentially affects the rhythmic quality of the language, is the fact that Maltese avoids weakening unstressed vowels (Azzopardi 1981; Calleja 1987).

Azzopardi (1981:38-39) analyses Maltese diphthongs as consisting of a vowel element followed by a consonantal /j/ or /w/ element. The Cardinal Vowel chart showing the diphthongs of Maltese as in Azzopardi (1981:91) are shown in Figure 2.2.

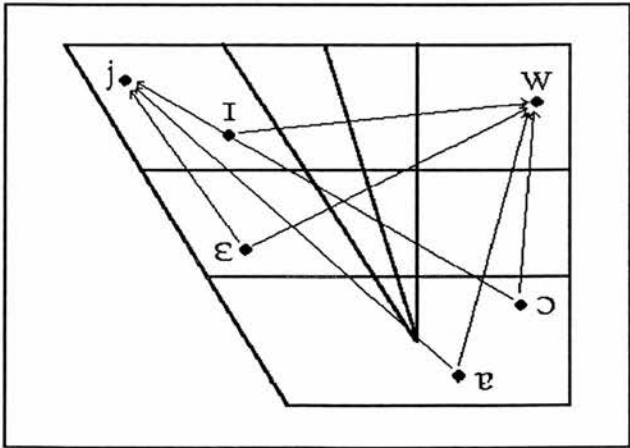


Figure 2.2

The phonemic inventory of Maltese consonants is shown in Figure 2.3.

| | Bilabial | Labio-dental | Alveolar | Post-alveolar | Palatal | Velar | Glottal |
|---------------------|----------|--------------|----------|---------------|---------|-------|---------|
| Plosive | p b | | t d | | | k g | ʔ |
| Nasal | m | | n | | | | |
| Fricative | | f v | s z | ʃ | | | h |
| Affricate | | | ts | tʃ dʒ | | | |
| Retroflex | | | r | | | | |
| Lateral approximant | | | l | | | | |
| Approximant | w | | | | j | | |

Figure 2.3

Detailed descriptions of the articulatory and acoustic facts relating to Maltese consonants can be found in Azzopardi (1981:105-121). It is worth noting that voiced obstruents are devoiced word-finally and that obstruent sequences and clusters agree in voicing. The underlying voicing of the first obstruent changes when necessary to agree with that of the second. Also noteworthy is the fact that consonants can be geminated in all contexts except word-initially.

Related to the above-mentioned observation about consonant gemination is the fact that Maltese makes use of contrastive length on consonants as well as vowels (Laver 1994:444). Some examples involving the use of consonant duration used contrastively are given below:

| | | | | | | |
|--------|--------------|---------|-----|---------|---------------|----------|
| 'koma | 'coma' | /kɔ:mɐ/ | vs. | 'koma | 'sleeve' | /kɔ:mɐ/; |
| 'laqat | 'he hit' | /lɐʔɐt/ | vs. | 'laqqat | 'he licked' | /lɐʔɐt/; |
| 'safar | 'travelling' | /sɐfɐr/ | vs. | 'saffar | 'he whistled' | /sɐfɐr/. |

2.2.2 Lexical stress in Maltese

It is well acknowledged that stressed syllables form the skeleton upon which intonation is built. It is therefore worthwhile, at this stage, to review the work on lexical stress in Maltese to date.

Lexical stress in Maltese is outlined in, *inter alia*, Sutcliffe (1936), Aquilina (1959, 1965), Brame (1972a, 1974) and Alexander Borg (1973, 1975). Although individual formulations differ, the accounts agree that lexical stress in Maltese is generally either final or penultimate. Although generally acknowledged, the occurrence of antepenultimate stress, especially in loan words, has often been dismissed as a "foreign-stress pattern" (Aquilina 1959:73).

The possibility of antepenultimate stress in Maltese lexical items was recognised as early as Sutcliffe (1936:12-13). Sutcliffe, however, also notes the tendency for stress in loan words to be regularised to native patterns. Thus:

In Maltese words the accent does not occur earlier than the penultimate syllable. Apparent exceptions to this rule are learned formulations or loan words which have not adapted themselves to the genius of the language, e.g. **artíkolu**, the definite 'article'. Similar words which have become really identified with the language omit the short vowel of the penultimate syllable, e.g. **kanónku** *canon* (ecclesiastical term) from Sicilian 'Canónicu', or 'Canónacu'.

It is interesting to note that Sutcliffe's very example of a non-regularised instance of antepenultimate stress has since been so regularised, to ar'tiklu.²¹ This fact can be construed as evidence for an ongoing process of regularisation of antepenultimate stress to native patterns. On the other hand, the list of examples of antepenultimately stressed items in present day Maltese is long. Amongst the examples of lexical items of Italian origin having antepenultimate stress in Maltese we find a'naliżi 'analysis', 'činiku 'cynic' and ka'tastrofi 'catastrophe'. Examples from English in which the original antepenultimate stress patterning is retained include 'bajsikil 'bicycle', 'barbikju 'barbecue' and 'terminus 'terminus'.

Like Sutcliffe, Aquilina (1959:73) observes a tendency for stress to be regularised in words such as 'stupidu by deletion of the penultimate syllable and reassignment of stress in penultimate position, thus resulting in the form /stu:pdu/. Other examples of this regularisation are 'mużika with the form /mu:zka/ and anti'patiku having the form /entri'pætku/.²² Aquilina suggests that the regularisation of antepenultimate to penultimate stress in cases such as the above is often a marker of the less educated speaker, thus implying that this phenomenon is limited. However, the number of examples of lexical items originally having antepenultimate stress which have become lexicalised as forms having penultimate stress is quite large. Examples include

²¹ The spelling of loan words is as in Aquilina's *Maltese - English Dictionary* Volumes 1 and 2 (1987, 1990). Aquilina makes use of the grave accent, ` , to mark the vowel of the stressed syllable in cases where the location of stress is not self-evident. Instead of Aquilina's convention I mark stress in both citation and phonetic form examples by means of superscript ' at the start of the stressed syllable. Examples from other authors in the text are also transliterated to conform to the stress-marking convention used here, although individual authors' conventions are retained in quotations.

²² Possible phonetic realisations for /stu:pdu/ and /mu:zka/ are [stu:bdu] and [mu:zka], although [stu:ptu] and [mu:zga] are also possible, cf. obstruent voicing rule above.

Maltese abi'tudni < Italian abi'tudine 'habit', 'periklu < Italian pe'ricolo 'danger', and 'stonku < Italian 'stomaco 'stomach'. The domain of place names provides additional illustrative material. Thus for example, we have 'Napli < Italian 'Napoli and 'Tripli < 'Tripoli, but 'Korsika not *'Korska < Italian 'Corsica. A number of non-phonological factors such as familiarity, frequency of use, and the period when an item was borrowed, may all have some influence on whether antepenultimate stress is retained in a lexical item or whether it is regularised to penultimate position. However, the main factor in the occurrence or otherwise of vowel deletion in such antepenultimately stressed items appears to be phonological. Thus, vowel deletion in both 'Napli and 'Tripli results in the word medial /-pl-/ cluster, a cluster which conforms to the phonotactic constraints of Maltese (for an outline of which cf. Azzopardi 1981:49-78) in that it can occur as a syllable onset without resyllabification. Vowel deletion in 'Korsika, on the other hand, results in /-rsk-/ , a sequence which cannot occur as a syllable onset unless it is resyllabified as /-r-sk/ with /-sk-/ occurring as a syllable onset. The added complexity involved in the regularisation of this latter example may contribute to the resistance, in this case, to vowel deletion and the subsequent regularisation of stress.

In short, the phenomenon of antepenultimate stress appears to me to be far too common in present day Maltese for its dismissal as a "foreign stress-pattern" to be acceptable.

Let us now look at the various other accounts of lexical stress in Maltese that have been proposed. Not surprisingly, the role played by segmental duration in determining

stress assignment is featured in all the accounts of stress in Maltese. Following his observation about antepenultimate stress in Maltese, Sutcliffe (1936:13) states two simple positional rules for stress placement in Maltese. He states that stress is final where the last syllable contains a long vowel or a short vowel followed by a sequence of two consonants (i.e. a heavy final syllable) and penultimate in all other cases.

Aquilina (1959:68), in his turn, observes that "all long vowels are stressed, but not all stressed vowels are long". Valid as this observation is Aquilina's rules for stress placement in Maltese suffer from a lack of generalisability as well as from the unnecessary complication introduced into the statement of his rules by a separate listing of examples of Semitic Maltese lexical items and Romance Maltese ones. Moreover, Aquilina (1965:30) states categorically that:

In the same word there can be one main primary stress, either on the penultimate or the last syllable.

In his insistence on the "foreignness" of antepenultimate stress, he fails to see the importance of his earlier generalisation in the explanation of antepenultimate stress in Maltese, namely that segmental duration is a crucial factor in this regard. Thus, for example, if, as Aquilina so rightly points out, "all long vowels are stressed", then there is nothing extraordinary in a form /stu:pidu/ with antepenultimate stress, stress in this case is assigned to the syllable containing the long vowel /u:/.

Brame's work on stress is based on the kind of analysis intimated by Sutcliffe's

(1936:13) explanations of the effect of morphological alternations on stress. The latter's excellent intuitions on the subject are worth quoting in full:

(a) The rule that a final long syllable is accented involves the consequence that if a long syllable is added to a word or if the last syllable becomes long, the accent moves forward. This happens whether the accent was previously on the penultimate or on the final syllable. Examples: **Málti** Maltese, plur. **Máltin**; **ħalliel** thief, plur. **ħallelin**; **sitta** six, **sittin** sixty.

(b) The accent also moves forward, if in the conjugation, for example, of a verb the last syllable, though retaining a short vowel, comes to end with two consonants; e.g. **bierek** he blessed; **berikt** I blessed; **bajjad** he whitened; **bajjad** I whitened.

(c) The accent also moves forward, if the prolongation of a word would otherwise leave the accent farther back than the penult. Examples: **qtilna** we killed, but **qtilniehom** we killed them; **sallab** he crucified, **sallabna** we crucified.

REM. The addition to a verb, as in a negative sentence, of the letter **x** causes the accent to fall on the last syllable e.g. **jista** he can, **ma jistax** he cannot.

Sutcliffe's final reminder draws attention to a fact which may be worth noting, namely that the shifting of stress to final position in ma jistax is accompanied not only by the addition of the negative suffix x, but also by lengthening of the vocalic element in the final syllable. This suggests a possible interpretation of the negative suffix as consisting underlyingly of a VC sequence such as ax to be added finally thus resulting in lengthening of the final syllable as well as stress shift to this syllable.

Brame (1972a, 1974), who was certainly aware of the work of both Sutcliffe and Aquilina develops a generative account of stress in Maltese in which he focuses on the morphophonological alternations of the verb to formulate a number of rules. Brame proposes to account for alternations such as those of 'ħataf' 'he grabbed', with

'ḥatfet (ḥataf + et) 'she grabbed' and 'ḥtaft (ḥataf + t) 'I grabbed', by means of two rules. The first of these rules is a rule for stress assignment which he states as follows (Brame 1974:45):

STRESS ASSIGNMENT: $V \rightarrow [+str] / \text{---} C_0((VC)VC_0^1)]$.

Brame's SPE-era notational concerns are not relevant here. It is, however, useful to show that the above rule abbreviates the following disjunctively ordered rules:

- (a) $V \rightarrow [+str] / \text{---} C_0VCVC_0^1]$
- (b) $V \rightarrow [+str] / \text{---} C_0VC_0^1]$
- (c) $V \rightarrow [+str] / \text{---} C_0]$

These rules provide environments for the derivation respectively of intermediate forms 'ḥatafet, 'ḥataf and ḥa'taft.

The second of Brame's rules relevant here is the rule of apocope (Brame 1972:25), more accurately revised as a rule of syncope in his later work (Brame 1974:40) as follows:

SYNCOPE: $\check{V} \rightarrow \phi / \text{---} CV$

This rule leaves 'ḥataf unchanged but results in appropriate adjustments of 'ḥatafet and ḥa'taft to 'ḥatfet and 'ḥtaft respectively.

As in other work on stress in Maltese, Brame recognises the importance of vowel duration as a factor in the equation. In order to account for the stress patterns of words such as ħaj'jat /ħej:t/ 'tailor', qat'tus /ʔet:us/ 'cat' and sul'tan /sul'ten/ 'king' with final stress, and 'ħdura /ħdu:re/ 'green-ness', 'qares /ʔe:res/ 'bitter' and 'kmamar /kmə:mər/ 'rooms' with penultimate stress, Brame proposes to deal with long vowels or diphthongs as underlying sequences of two vowels. This strategy successfully creates the environment for the correct application of the stress rule.

Brame's rule of syncope suggests that he assumes that antepenultimate stress is unacceptable in Maltese. The rule works well with respect to the morphophonological alternations of the verb illustrated in Brame's account. It generates wrongly, however, in cases in which the acceptable form is in fact one having antepenultimate stress. For example, Brame's rules generate the form 'muḥka rather than 'muḥika. A more serious shortcoming of the account is that it generates forms such as *ka'tastrfi rather than the acceptable form ka'tastrofi. The rule of syncope is important as regards the generation of many correct forms and therefore cannot be eliminated. Rules for amending incorrectly generated forms could however be included in the grammar in the form of restrictions on the formation of clusters which are phonotactically unacceptable. The importance of Brame's rule for stress assignment is the contribution it makes to formalising earlier observations about stress. It also offers more generalisability than is present in other accounts.

Like others before him Alexander Borg (1973:9) recognises that stress in Maltese is related to segmental duration. His rules for stress placement are also worth quoting

in full.

- (i) Words bear stress on a long vowel or diphthong, or, in the absence of these, on a short vowel preceding a homorganic sequence or consonant cluster.
- (ii) Polysyllabic words having no long vowels, diphthongs, homorganic sequences or consonant clusters bear stress on their penultimate syllable.
- (iii) Words having more than one long vowel or diphthong bear stress on the last of these.
- (iv) Words having more than one homorganic sequence or consonant cluster bear stress on the vowel preceding the last of these. Geminated consonants take precedence over affricates.

An important point made by Alexander Borg needs to be noted, this being the fact that the above rules are crucially ordered.

Alexander Borg (1975:12) summarises his earlier account of lexical stress in Maltese as follows:

Primary stress is almost always predictable. It falls on the long vocalic nucleus nearest the final word boundary, or on the short vowel preceding the consonant cluster nearest the final boundary. In words without long vowels or consonant clusters, it falls on the penultimate syllable of the word.

As in other accounts, the default position for stress in cases where none of the stated conditions of segmental duration apply, is penultimate. Although Alexander Borg does not explicitly mention antepenultimate stress, his rules for stress placement in Maltese capture the fact that, in words with light final and penultimate syllables as well as a heavy antepenultimate syllable, then stress is antepenultimate. Although

Borg does not give an explicit definition of what he understands by cluster, it can be inferred that when he refers to cluster he means any of the sequences of consonants which he lists as permissible word-initially, medially or finally rather than sequences of consonants which constitute acceptable syllable onsets or codas.

The main problem with Alexander Borg's account lies in the fact that he makes no direct reference to the syllable, so that it is segmental structure rather than syllable structure which provides the domain for the application of stress (cf. also Azzopardi 1981:5). Although similar to the rule in Alexander Borg (1975:12), the generalised rule for lexical stress that will be adopted here differs from Borg's in that it is syllable structure rather than mere segmental structure that provides the necessary domain for the application of the stress rule. Thus, with the exception of some of the more recent loans into the language which have not yet fully assimilated to the phonological system of Maltese, I assume lexical stress in Maltese to operate according to the following rule:

Lexical Stress

Stress falls on the syllable which is [+heavy]. In words containing no [+heavy] syllable, stress falls on the penultimate syllable.

Furthermore, I assume a heavy syllable in Maltese to consist either of a long vowel or diphthong followed optionally by a consonant, or of a short vowel followed either by any permissible syllable coda or by a geminate. Alternations such as, for example, those noted by Sutcliffe (1936:13) quoted earlier between 'Malti 'Maltese' /mɛ:ltɪ/ vs.

plural Mal'tin /mɛl'tin/, bierek 'he blessed' /bi:rɛk/ vs. be'rikt 'I blessed' /bɛ'rɪkt/ and 'qtilna 'we killed' /ʔtɪlnɐ/ vs. qtil'niehom 'we killed them' /ʔtɪl'niɔm/ can be accounted for in terms of the above rule. The former two pairs of examples quoted illustrate the fact that stress shifts to a final syllable which have been made heavy as a result of morphological changes. Furthermore, it can be observed that a stressed syllable becomes light when unstressed. This suggests that it is only possible to have one [+heavy] syllable in a word. It is therefore unnecessary to specify, as Borg does, that the [+heavy] syllable which is to be stressed is that which comes closest to the end of the word. In the case of the penultimately stressed 'qtilna, the absence of a heavy syllable in this case results in stress falling by default on the penultimate syllable. The introduction of the heavy penultimate syllable in qtil'niehom results in a stress shift to this heavy syllable.

The overall impression of "accent" in the speech of speakers of Maltese English (henceforward ME), is a function of segmental as well as non-segmental characteristics. Therefore, although it is the nature of the prosody of ME as influenced by that of Maltese that interests us here (cf. Chapter 5), it is useful to outline certain very definite differences between ME and other varieties of English, collectively referred to here as Standard English (henceforward SE). The outline given in this Chapter should provide the reader with an awareness of the more conspicuous distinguishing features of ME and contribute to a fuller understanding of the subsequent description of aspects of its prosody.

In previous works on the phonetics and phonology of ME (cf. Delceppo 1986; Calleja 1987), Gimson's (1980) description of the pronunciation of British English, specifically of Received Pronunciation (henceforward RP), has been used as the standard for the comparison between ME and SE. Although comparing to a standard may suggest that the variety being compared falls short in terms of correctness, acceptability etc., the decision for this choice of standard is well motivated from both educational and sociolinguistic points of view (cf. Sections 1.2 and 1.3). My description will therefore also be based on a comparison with the same standard used in previous work, RP. Throughout this section, and especially initially in the description of the segmental aspects of ME, the influence of Maltese on the characteristic features of ME will be considered in some detail.

The existing work available in this area has been used extensively in the description which follows. However, since this is limited, I have had to rely quite heavily on my own intuitions. As in the works on ME by Delceppo and Calleja referred to above, the description here is based mainly on auditory analysis. My intuitions have been supplemented by instrumental evidence obtained in the course of segmentation of the F0 contours used to exemplify Chapter 5.

There is nothing controversial about a statement to the effect that ME is influenced by Maltese. Empirical evidence in support of such a statement is, however, very limited.

In one study, Delceppo (1986:148) claims that the Maltese child acquires English as an extension of the Maltese system rather than as a separate system:

The children do not produce those vowels which are not within their phonological system but they replace them with Maltese vowel phonemes. Likewise the target consonants are substituted for the Maltese consonants and have first language value.

In another study, the inconsistent pronunciation of four relatively unfamiliar words, diocesan, Catholicism, affiliation and apotheosis leads Calleja (1987:71) to suggest that:

If the speakers have internalised one phonological system which serves both languages (as Delceppo 1985 concludes:148) their [i.e. the speakers'] predictive power is based on assimilated Maltese patterns.

Like Delceppo, Calleja (1987:112) concludes that the Maltese speakers in her study "transfer their native phonological habits to English". In spite of a slight fall from fashion of theories invoking transfer in recent work in the field of interlanguage (cf. for example Schmidt 1987), there is still a great deal of support for a role for the investigation of transfer processes in second language research (cf. for example Odlin 1989). As Broselow (1987:262) puts it:

[Recent research has] led to a revision of the Contrastive Analysis Hypothesis; it is now generally believed that differences between the native language and the target language may be used *not to predict but to explain* the nature of some subset of actually occurring errors. This weaker version of the hypothesis is clearly less interesting than the original, since it lacks predictive power and is therefore unfalsifiable. But it is clear that interference is one factor in accounting for learners' errors, although only one of several. (My italics)

The soundness of concentrating, in this work, on the effect of transfer processes, is grounded in the fact that it is primarily in an "explanatory" rather than a "predictive" mode that this preliminary investigation of ME is conducted.

2.3.1 Selected segmental characteristics of Maltese English

2.3.1.1 Phonemic inventory

The phonemic inventory of Maltese differs in a number of ways from that of SE. In the following a comparison is made of the phonemic inventories of Maltese as in Azzopardi (1981) and of RP as in Gimson (1980).

For ease of reference, the Cardinal vowel chart of the vowels in Maltese shown earlier (cf. 2.2.1) as Figure 2.1 is repeated below as Figure 2.1'.

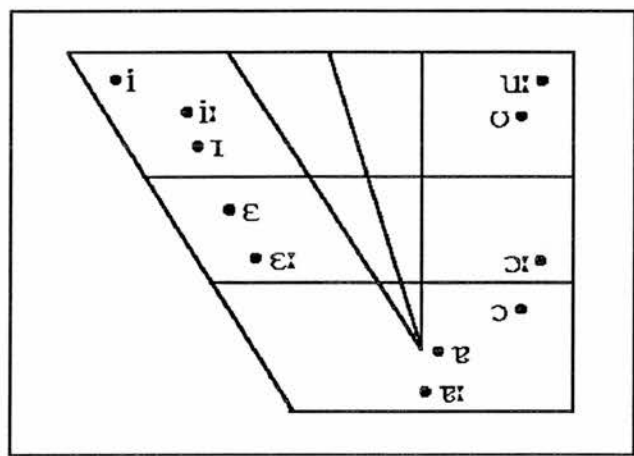


Figure 2.1'

The relative auditory qualities of the Maltese vowels as shown above can be compared to those for the RP vowels as in Gimson (1980) shown in Figure 2.4:

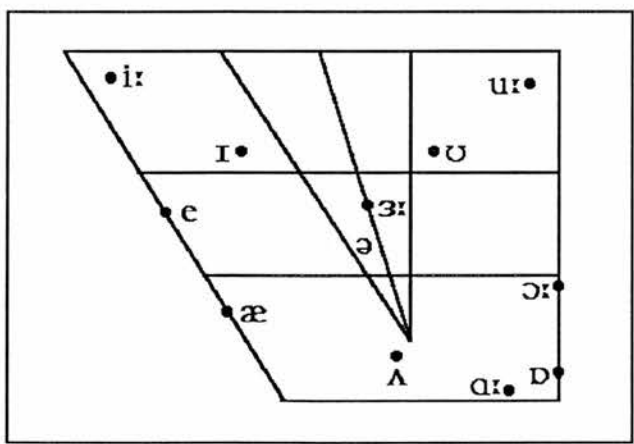


Figure 2.4

A summary of the auditory correspondences and differences between the two systems is given in Table 2.3 below.

| Azzopardi (1981) | Gimson (1980) | Comments |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ɪ | ɪ | Similar auditory qualities but RP /ɪ/ slightly more retracted and more open than Maltese /ɪ/. ME /ɪ/ similar in quality to RP /ɪ/ but see also *. |
| i: | - | No RP equivalent. Maltese /i:/ similar to but more fronted and less open than Maltese /ɪ/, its nearest Maltese equivalent. ME /ɪ/ may therefore sometimes have the value of Maltese /i:/ *. |
| i | i: | RP /i:/ similar to Maltese /i/. ME /i:/ therefore similar in quality to RP /i:/. |
| ɛ | e | RP /e/ similar to but slightly more fronted than Maltese /ɛ/ . ME /e/ similar in quality to RP /e/ but see also **. |
| ɛ: | - | No RP equivalent. Maltese /ɛ:/ similar to but more open and more retracted than Maltese /ɛ/. ME /e/ may therefore sometimes have the value of Maltese /ɛ:/ **. |
| - | æ | No Maltese equivalent for the RP /æ/ |
| ɐ | ʌ | RP /ʌ/ similar to Maltese /ɐ/ but generally more fronted. ME /ʌ/ may therefore have more front-back variability than RP /ʌ/ . |
| ɐ: | ɑ: | RP /ɑ:/ generally more retracted than Maltese /ɐ:/ . ME /ɑ:/ may therefore sometimes have a quality similar to but slightly more fronted than that for RP /ɑ:/. |
| ɔ | ɒ | RP /ɒ/ more open and more retracted than Maltese /ɔ/, its nearest Maltese equivalent. ME value for /ɒ/ therefore closer to the value for CV [ɔ] and hence to that of RP /ɔ:/, see also ***. |
| ɔ: | ɔ: | RP /ɔ:/ similar to but more retracted and more open than Maltese /ɔ:/ and therefore similar to Maltese /ɔ/. ME /ɔ:/ may therefore fluctuate between the qualities of Maltese /ɔ/ and /ɔ:/ ***. |
| ʊ | ʊ | RP /ʊ/ more open and more fronted than Maltese /u/. ME /ʊ/ less open and more retracted than RP /ʊ/. |
| u: | u: | Similar auditory qualities between RP /u:/ and Maltese /u:/ . ME /u:/ similar in quality to RP /u:/. |
| - | ɜ: | No Maltese equivalent for the RP central vowel /ɜ:/ |
| - | ə | No Maltese equivalent for the RP central vowel /ə/. |
| <p>TABLE 2.3 <i>Correspondences Between the Auditory Values of the Maltese Vowels as in Azzopardi (1981) and RP Vowels as in Gimson (1980) with Indications as to the Probable Values of ME Vowels</i></p> | | |

On the basis of the differences between the Maltese and RP systems, Delceppo (1986) predicts differences between the vowels of RP and ME in the areas lacking direct correspondences between Maltese and RP. In other words, she predicts no significant differences for speakers of ME in the pronunciation of /ɪ iː e ʌ ɑː ɒ ɔː ʊ uː/, while /æ ɜː ə/ on the other hand, could be problematic.

The Cardinal vowel chart showing the diphthongs in Maltese shown previously as Figure 2.2 is repeated below as Figure 2.2'.

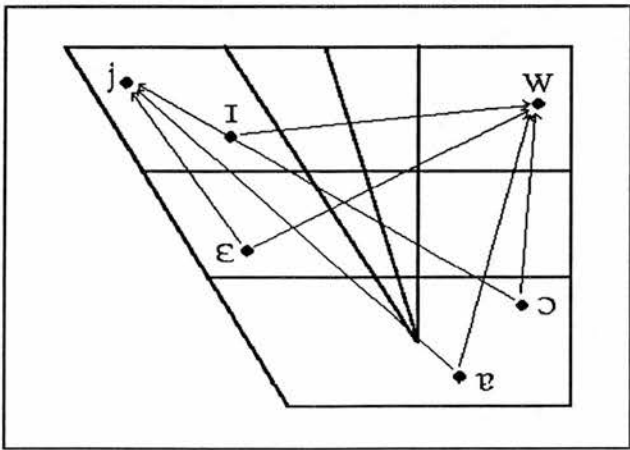


Figure 2.2'

This can be compared to the Cardinal vowel chart for the diphthongs in RP as in Gimson (1980) shown in Figure 2.5 below:

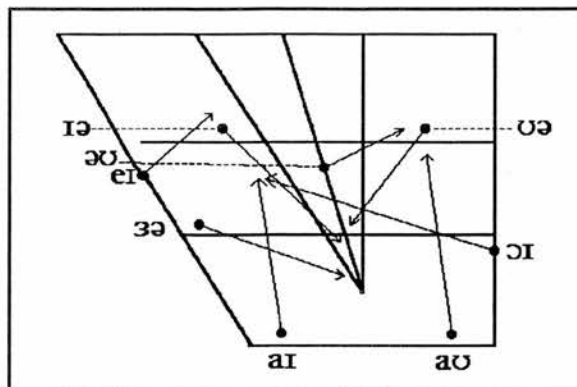


Figure 2.5

No significant differences in the ME renditions of /eɪ/ /aɪ/ /ɔɪ/ and /aʊ/ are expected but differences are predicted in the ME versions of all diphthongs (and triphthongs) containing a schwa element.

The consonant inventory of Maltese differs from that of RP in a number of ways. First of all, the phonemes /θ/ and /ð/, as well as the palato-alveolar affricate /ʒ/ and the velar nasal /ŋ/ are not present in the Maltese system. Allophonic realisations of both these latter sounds occur in Maltese however as for example in:

| | | | |
|--------------|--------------|---|------------------------------------------------|
| <u>xbajt</u> | 'I'm fed up' | - | phonemically /ʃbɛjt/ but phonetically [ʒbɛjt]; |
| <u>bank</u> | 'bank' | - | phonemically /bɛnk/ but phonetically [bɛŋk]. |

Secondly, the Maltese phonemic inventory also contains two phonemes not present in RP: /ts/ and /ʔ/.

While the replacement of /θ/ and /ð/ by /t/ and /d/ respectively has often been noted

to be a characteristic of Maltese (cf. for example Azzopardi 1981; Calleja 1987; Mazzon 1992), no reports are available of the influence of Maltese on ME with respect to other consonants lacking a direct Maltese-RP correspondence.

In spite of a call by Ard (1989), for an improvement in the construction of phonological representations in work on second language phonology, the issue of representation in the relevant literature remains problematic. In the remaining part of this Chapter I refer to ME forms either as approximations to the expected realisations of particular phonemic forms or in terms of the RP phonetic form most likely to capture the correspondence between the ME form and its RP equivalent.

2.3.1.2 Phonetic realisation

Delceppo's study is based on the speech of ten six-year old learners of English. Apart from informal exposure to English inevitable in a bilingual situation, such a population would have had formal exposure to English in the classroom setting for a year (cf. Subsection 1.2.3). Delceppo's predictions are borne out for the speakers in her study who replace RP /æ/ with realisations similar to those of /ɛ/, /ɛ:/, /ɐ/ or /ɐ:/ from their Maltese system, RP /ɜ:/ with realisations similar to those of Maltese /ɛ:/, /ɔ/ or /ɔ:/ and RP /ə/ generally with realisations approaching those of Maltese /ɛ/. Diphthongs containing a schwa element are also observed to be problematic.

Delceppo's results are only partly confirmed by Calleja (1987). In her study, Calleja looks at aspects of the English spoken by ten Maltese university students. Calleja's

results, like Delceppo's, suggest that the RP central vowels /ɜ:/ and /ə/ are problematic for speakers of ME. In her data, the most common realisation for RP /ɜ:/ was a vowel similar to a realisation of RP /e/. Renditions of RP schwa were thoroughly inconsistent, with substitutions of this vowel by ME realisations similar to those of RP /e æ ʌ ɒ ɪ/. /ɜ:/ and /ə/ proved relatively unproblematic for the speakers of ME only when they occurred in the final (and unstressed) syllable of the word. Contrary to Delceppo's results, however, Calleja's suggest that, despite a number of exceptions, the vowel /æ/ is not problematic to the speakers of ME in her study. In fact, the few cases Calleja notes to be problematic constitute instances of negative influence from the orthography, a phenomenon observed to be quite common in the English of speakers of Maltese (as also in that of other learners of English, cf. Altenberg and Vago 1983) and noted also by Azzopardi (1981). The influence of reading on pronunciation stems from the fact that, as Sutcliffe (1936:9) points out:

The Maltese alphabet is very nearly a perfect one. Except for the digraph *gh* to represent the letter 'għajn' it has one sign for each sound; and only one sound is represented by each sign except where assimilation occurs.

Thus, for example, influence from Maltese would result in speakers of ME assigning a value to orthographic *a* of realisations approximating expected ones for either /ʌ/ or /ɑ:/. This is in fact the case in 50% of the realisations of aquamarine in Calleja's data (Calleja 1987:48). A similar example from my Map Task data of /æ/ being realised as [ʌ] is Speaker 4's [ʌntelɔʊp] for antelope. On the whole, however, especially in items which are used relatively frequently, ME seems to retain the /æ/-/ɑ:/ contrast.

Data on the realisation of the diphthongs by speakers of ME is extremely limited. However, Calleja (1987:64-65) reports an almost consistent realisation of RP /əʊ/ as [ɔʊ] in ME (cf. pronunciation of antelope above) and a tendency to monophthongise /ɛə/ to ME approximations of RP /e/, /æ/ or sometimes even of /ɜ:/.

In conclusion, with the exception of the central vowels /ɜ:/ and /ə/, distinctive relationships are maintained between the vowels in the ME system as compared to those in RP. The ME vowels differ from their RP equivalents in terms of their quality since they tend to approximate to the quality of corresponding vowels in the Maltese system. It is possible that the RP contrast between /e/ and /ɜ:/ is maintained in ME as a contrast between /e/ and a longer version /e:/ as in Maltese /ɛ:/, a contrast which also exists in Maltese. As regards /ə/, no discernible pattern of realisation emerges from the available studies.

Vowel weakening happens to a much lesser degree in ME than in SE. Examples in ME of unstressed short vowels which are not reduced are abundant. Some examples are given below:

- | | |
|-----------------|----------------------------------------------------------|
| <u>bottom</u> | - pronounced [bɒtɪm] in ME as compared to [bɒtəm] in RP; |
| <u>boundary</u> | - pronounced [baʊndərɪ] in ME as compared to [baʊndəri]. |

While /ə/ does not carry a heavy load in so far as lexical distinctions in English are concerned, it is however an important contributor to the characteristic rhythm of RP. The fact that /ə/ is rarely realised in ME can therefore be hypothesised to be an

important factor in the different rhythmic quality of ME as compared to that of RP.

Related to the above in that it results in a full-vowelled syllable in ME where RP lacks such a syllable, is the tendency for vowel insertion to occur preceding syllabic consonants in ME, for example:

bottle - pronounced [bɒtɪl] in ME as opposed to [bɒtl] in RP.

As noted earlier, the most obvious difference between the consonant inventories of Maltese and RP is that involving the lack in the former of the contrast between /θ/ and /ð/. ME, tends, for most speakers and to differing degrees, to exclude the interdental fricatives /θ/ and /ð/, replacing them by realisations of the stops /t/ and /d/. As Calleja (1987:69) points out, many Maltese speakers of English are aware of this tendency and in situations which they deem to require "their best English" often make a conscious effort at producing the interdental fricatives. My ME Map Task data supports this observation, but also suggests that the speakers did not consistently produce the fricatives successfully, often producing [t] and [d] when their guard was dropped as a result of their concentration on the task in hand.

In spite of the fact that /ʒ/ does not have phonemic status in Maltese, ME /ʒ/ is realised in a way comparable to its realisation in RP. Realisations of /ŋ/ by speakers of ME, on the other hand, often have the value of [ŋg] rather than simply as [ŋ], for example:

singing - pronounced as [sɪŋɡɪŋɡ] in ME as opposed to RP [sɪŋɪŋ].

The influence of Maltese /ts/ on ME seems to be negligible. As regards /ɾ/, on the other hand, a tendency for glottal stop insertion at word boundaries can be observed. This is in keeping with evidence showing that glottal stop insertion is a common strategy used by second language learners to alter the syllable structure of the target language to make it resemble the syllable structure of their L1 (cf. Tarone 1987:241). Glottal stop insertion in ME frequently occurs in cases in which a /j/ or /w/ glide would be expected in SE, for example, go east pronounced in ME as [ɡɔwʔ ɪst]

While the absence of the interdental fricatives is the most significant observable consonant difference between ME and SE at the phonemic level, there are several differences in the phonetic implementation of many of the sounds of English by speakers of ME. Thus, even for speakers whose inventory does include the fricatives, these fricatives tend to be dental rather than interdental, with the result that the perceived value for the fricatives is often close to that of /s/ and /z/.

RP /r/ in ME is usually realised as in Maltese, that is tapped or slightly trilled. ME also differs from RP in having a post-vocalic [r] in words such as bore and tour. The realisation of ME /r/, like that of ME /l/ tends to involve a strong degree of palatalisation.

Stops in ME are characteristically fully released, as are stops in Maltese (cf. Azzopardi 1981:191). In many cases, the release of the stop closure results in a perceptible

vowel effect, as for example in a possible ME pronunciation of huge as [hjuɖʒə]. Also, voiceless stops in Maltese tend to be aspirated in all positions in the word (cf. Azzopardi 1981:191). The carry-over effect of this characteristic into ME is particularly noticeable.

2.3.1.3 Contextual effects in Maltese English

Context-dependent allophonic distinctions made in SE are often lost in ME. This is particularly true when the same or a similar distinction is not made in Maltese. Thus, for example, although ME maintains the SE tendency for vowels to be longer preceding a voiced consonant than before a voiceless consonant, there are quantitative differences in the realisation of the vowel lengthening involved. An acoustic investigation of English vowel durations (excluding /ə/) in the context preceding voiced vs. voiceless stops for two speakers of ME and a speaker of SE (Vella 1988) shows that for both speakers of ME as for the speaker of SE, the vowels are longer before the voiced, than before the voiceless, stop. As compared to the speaker of SE in the same study, however, the pattern of durational lengthening by both speakers of ME is more variable. The results suggest that, in contrast to the speaker of SE, both speakers of ME tend to lengthen long vowels to a greater extent than they do short vowels in the context of a following voiced stop.

Another distinction which is lost in ME is the allophonic distinction between the environmentally conditioned [l] and [ɫ]. The contrast at the beginning and end respectively of a word like lull, for example, is not produced by ME speakers, this

particular example being pronounced as [lʌl:] rather than [lʌt].

A characteristic of Maltese that has an observable carry-over effect into ME is word-final devoicing (cf. Subsection 2.2.1). This is a regular, if not uniform, feature of ME.

A number of examples from the Map Tasks can be cited:

- | | |
|-------------------|--------------------------------------------|
| <u>trig point</u> | - pronounced as [trɪk pɔɪnt], (Speaker 4); |
| <u>cottage</u> | - pronounced as [kɒtɪʃ], (Speaker 7); |
| <u>mountains</u> | - pronounced as [maʊntɪns], (Speaker 8). |

Apart from word-final devoicing, Maltese is also characterised by voicing assimilation in consonant clusters (cf. Subsection 2.2.1). Like word-final devoicing, the carry over effect of this characteristic of Maltese is strong resulting in a tendency in ME for voiceless consonants to be voiced in intervocalic position. An example of inappropriate intervocalic voicing in ME of a voiceless consonant in RP is a pronunciation of the /s/ in basin as [beɪzɪn]. Intervocalic voicing of voiceless consonants represents a relatively general pattern in ME.

2.3.2 Stress in Maltese English

Work on non-segmental aspects of ME is to my knowledge limited to Calleja's (1987) study of the stress and rhythmic characteristics of ME. Apart from their effect on the quality of the vowels and consonants of ME (cf. for example, Odlin 1989), ME patterns of stress which differ from those in SE also have an effect on the prosody of the second language. The study of these stress patterns is therefore useful in the

context of this work and will be discussed next.

2.3.2.1 Lexical stress in Maltese English

Stress in ME is strongly influenced by Maltese. The resulting ME stress patterning often differs from that of SE. Lexical stress in Maltese falls finally or penultimately, only rarely falling on the antepenultimate syllable of the word, and this usually in loan words (cf. Subsection 2.2.2). It is in fact in words in which SE stresses either the antepenultimate, or some syllable earlier in the word, that differences between ME and SE as regards lexical stress are most likely to occur.

Calleja (1987:71-85) reports two general tendencies. First, stress can shift from its original SE position to a syllable later in the word. For example, the most common renderings in Calleja's study of 'melancholy and 'criticism which both have antepenultimate stress in RP, are me'lancholy (with antepenultimate stress) and criti'cism (with penultimate stress) respectively in ME. A tendency for primary stress to shift to a final or penultimate secondary stressed syllable similar to that noted here has also been reported to occur in the English of Spanish learners of English (Mairs 1989).

The second related tendency noted by Calleja involves words of three or more syllables being stressed twice. An example from Calleja's data is the pronunciation of RP 'caterpillar with stress on the first and third syllables, thus 'cater'pillar. Calleja (1987:84) says of this phenomenon:

It is as though the word itself is broken up into feet and thus a rhythmic pattern within the same word is established. The word is thus treated as a phrase.

Let us look more closely at the phenomenon reported by Calleja (cf. above) by examining stress placement in a number of ME versions of words having antepenultimate stress in SE. Thus, the most likely ME pronunciation of SE 'baptism is bap'tism. Segmentally, the [ə] in the final syllable of SE [ˈbæptɪzəm] is replaced by [ɪ], thus [bæp'tɪzɪm] with penultimate rather than antepenultimate stress as in ME. Other SE words such as messenger, circumference, satisfactory and characteristically, which though prosodically different to baptism, are like baptism in that they are antepenultimately stressed and have [ə] in their last syllable in SE, are not affected by stress shifting as is ME baptism but are pronounced as in SE.

However, stress-shifting always occurs in ME versions of SE lexical items having antepenultimate stress. Thus:

| | | |
|----|--------------------|----------------------------|
| RP | <u>'amplifier</u> | → ME <u>ampli'fier</u> ; |
| | <u>'ectoplasm</u> | → <u>ecto'plasm</u> ; |
| | <u>'centimeter</u> | → <u>centi'meter</u> ; and |
| | <u>'indicator</u> | → <u>indi'cator</u> . |

What this indicates is that although ME has no tolerance for antepenultimate stress, it is generally able to accommodate antepenultimate lexical stress. SE antepenultimate lexical stress is usually realised as penultimate stress in ME although it is also possible, as reported by Calleja (cf. above), for a lexical item to be

treated as though it consisted of two units, thus receiving two stresses. Of the above examples, the most likely candidate for this is ectoplasm, for which one can imagine possible ME renderings as either 'ecto'plasm or as ecto'plasm.

Any generalisation made on the basis of the limited data presented above is bound to be tentative. However a clear pattern emerges on closer examination of the prosodic structure of ME words of three syllables or more in which lexical stress shifts to penultimate position as compared to those in which it does not. The generalisation seems to be that in ME words in which stress is shifted to penultimate position, for example, ampli'fier, the penultimate syllable is unreduced, and hence potentially stressable, in relation to the weaker final syllable; stress cannot shift to penultimate position in words such as messenger, however, as the penultimate syllable in this case is weak in relation to the unreduced antepenultimate syllable. Phonological criteria play an important role in the rules for stress placement in ME. These rules are often influenced to a great degree by rules for stress placement in Maltese (cf. Subsection 2.2.2).

Stress in noun/verb pairs such as 'refuse/re'fuse is distinct in ME as it is SE. However, in an obvious case of overgeneralization, students of Engineering seem to have developed a new noun/verb pair in the manner of other such pairs, thus using 'display/dis'play²³ in an analogous fashion to other pairs.

²³ Although a similar distinction is made in American English, it is likely that the distinction in ME results from an active process of generalisation since it is British, rather than American English which serves as the model for ME.

Unlike lexical stress, stress in compounds and phrases in ME exhibits patterns of realisation which differ from those of SE in consistent ways. Although rule formulations differ, it is generally agreed that stress assignment in compounds in SE follows the Compound Stress Rule (CSR), according to which primary stress falls on the first element of a two-element compound. Stress in phrases, on the other hand, is realised in accordance with the Nuclear Stress Rule (NSR) which assigns secondary stress to the first element of the phrase and primary stress to the second (cf. for example, Chomsky and Halle, 1968; Liberman and Prince, 1977). Thus, SE uses stress to distinguish between a 'blackbird and a black 'bird. Fudge (1984:134) generalises as follows:

[Compounds] tend to have a main stress near the beginning of the combination, rather as single words have a tendency to bear penultimate or antepenultimate stress rather than final stress; phrase constructions, in which the individual words have much more independence, tend to have main stress on the final element.

The stress distinction between compounds and phrases as in SE is generally retained by speakers of ME in disyllabic compounds and phrases. Thus for example, a stress distinction is made between 'hijack and high 'risk with the CSR applying in the former case and the NSR in the latter case. However, while the stress distinction resulting from operation of the CSR as opposed to the NSR is generally retained in ME disyllabic compounds, it is lost in trisyllabic compounds such as hijacker and high risker. In both these cases, primary stress in ME falls on the penultimate syllable of

the unit, thus hi'jacker and high 'risker as opposed to SE 'hijacker and high 'risker. Though the above is a fair generalisation, it will benefit from a separate examination of stress assignment in ME compounds and phrases. Let us therefore look first at stress assignment in ME compounds.

Compound stress in ME is assigned as in SE in all disyllabic compounds such as 'airport, 'seagull and 'breadcrumb i.e. primary stress falls on the initial element of the compound. The CSR also operates as in SE in trisyllabic compounds having a disyllabic first element and a monosyllabic second element, for example, 'microphone, 'orange juice and 'chocolate cake.

The CSR does not, however, operate in the same way in ME as in SE in trisyllabic compounds having a monosyllabic first element and a disyllabic second element. Thus, citation forms of air pocket, sea monster and bread basket are realised in ME as air 'pocket, sea 'monster and bread 'basket respectively as opposed to SE renditions of 'air pocket, 'sea monster and 'bread basket. Other examples of this kind of stress pattern are common in ME, for example, dish'washer, pick'pocket and wind'surfing rather than SE 'dishwasher, 'pickpocket and 'windsurfing. These latter examples involve secondary stress falling on the first element and primary stress falling on the second element of the compound thus resulting in a ME stress pattern for these compounds as in phrases subject to the NSR in SE.

Four syllable compounds having two disyllabic elements also result in a stress pattern consisting of secondary stress on the first element and primary stress on the second

element of the compound. Thus, baking powder and wedding present are realised as baking 'powder and wedding 'present respectively in ME rather than as 'baking powder and 'wedding present as in SE. The stress pattern just noted is also often to be found in compounds in which stress on the second element is normally final, thus resulting, for example, in a ME pronunciation of income sup'port rather than SE 'income support.

The generalisation as regards ME compounds is therefore that, except in compounds having a monosyllabic second element in which case stress in ME is assigned as in SE on the first element of the compound, stress falls on the second element in the compound rather than on the first. In other words, ME treats SE compounds as if they were lexical items, stress being assigned accordingly as in ME lexical items (cf. Subsection 2.3.2.1).

Let us now turn to stress assignment in ME phrases. In general, stress in phrases in ME is assigned as in SE. However, there is one exception. It was mentioned earlier that in ME as in SE the operation of the NSR as opposed to the CSR in disyllabic units results in distinct stress patterns for the phrase high risk and the compound hijack. Calleja's (1987) results suggest however, that the NSR in ME does not always operate as in RP. Thus, while none of the ME pronunciations of the examples in Calleja's data involving the CSR differed from expected RP responses, the informants in the study responded incorrectly between 40% and 100% of the time to all the examples involving the NSR. RP ground'floor, for example, was in all cases pronounced as 'ground,floor while six of the ten renderings of downstairs were

pronounced 'down,stairs rather than down'stairs as in RP. Although not extremely common, other examples of disyllabic phrases which are prone to the backshifting of primary stress noted by Calleja can be found. Two examples from the Map Tasks can be quoted:

wooden stairs - pronounced as 'wooden,stairs, (Speaker 2, line15);
big wheel - pronounced as 'big,wheel, (Speaker 2, line 19).

These particular examples are possibly both speaker- and situation-dependent and possibly involve overgeneralisation of a pattern appearing to the Speaker to sound more like "good English". However, taken together with Calleja's examples of this aspect of the phenomenon (cf. above), they can be seen to constitute evidence for a regular process of backshifting of primary stress in ME phrases having a monosyllabic second element.

In view of the above, a conclusion regarding stress in compounds and phrases in ME can be drawn. It is fairly clear that the favoured position for primary stress in ME is penultimate within the unit for compounds as well as for phrases. It is noteworthy that the ME compounds which do not differ from those in SE are compounds having a monosyllabic second element, in other words those structures in which primary stress as in SE nevertheless results in the unit being either penultimately or antepenultimately stressed. Primary stress assigned as in SE to compounds other than those having the aforementioned structures would result in structures having primary stress on a syllable placed earlier than antepenultimately in the unit. Assuming that compounds

are in fact treated as units, the process of rightward stress shifting in ME compounds can be explained as resulting from the avoidance in ME of stress earlier than on the antepenultimate syllable. In other words, this process parallels that described in Subsection 2.3.2.1 with regard to lexical stress in ME versions of items having stress earlier than on the antepenultimate syllable in SE.

Moreover, phrases which are prone to backward stress shifting in ME as compared to SE are disyllabic phrases having primary stress on the last syllable of the unit. A preference for penultimate rather than final position often results in stress being shifted from final to penultimate position in the unit.

Chapter 3

DESCRIPTION AND ANALYSIS OF THE STRUCTURE OF INTONATION

Ladd's (1980:ix) remark concerning what he calls "different descriptions of the same beast" is based on two seemingly contradictory factors which emerge in surveying the literature on intonational phonology. These are, on the one hand, the remarkable consistency which characterises observations of the phenomena being described, and on the other, the equally striking diversity in the interpretation of that data and in the terminology used to describe it.

This Chapter strives to present an overview of the field in terms of some of the characteristics of the structure of intonation which have proved most elusive to the various descriptive and analytical procedures formulated over the years. In so doing I hope to establish both a theoretical and a terminological basis for my work.

The Chapter begins with a brief sketch of aspects of the work on intonation in the American Structuralist and the British traditions in Section 3.1. Elements from both of these traditions have gone into the making of more recent work in the growing tradition of intonational phonology (Ladd 1992). In view of the fact that it is within the general framework of intonational phonology that the analysis in Chapters 4 and 5 is grounded, the basic tenets of the framework are outlined in Section 3.2. Lastly, Section 3.3 examines the role of nuclearity, and specifically post-nuclearity (Subsection 3.3.2), in establishing both the prosodic structure and intonational

characteristics of a language. The discussion in this section provides useful background to the analysis of these aspects of the prosody of Maltese and Maltese English in Chapters 4 and 5 respectively.

3.1 "Tone" versus "tune" analyses

Attempts at developing a framework for the description of intonation may be grouped into two main traditions, which, broadly speaking, are represented by linguists from opposite sides of the Atlantic.

The contours in Figure 3.1 below can be used to illustrate an important source of divergence between the two traditions.

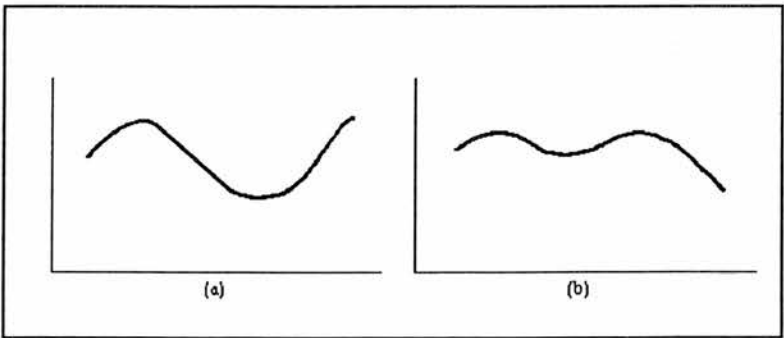


Figure 3.1

A number of observations can be made regarding these contours, only two of which will concern us here. First of all, specific peaks and valleys, as well as definite beginning and ending points, can be identified for both contours in Figure 3.1.

Secondly, comparison of the contours shows that while there are in fact only minute differences between the initial part of the contour in (a) and that of the contour in (b), the contours differ substantially in their latter parts.

The two main traditions in the analysis and description of intonation seem to have evolved in response to observations about intonation such as these. Thus, linguists working within the American Structuralist tradition developed frameworks which sought to pinpoint and describe **structurally significant** "tones" in the intonation contour. Points on the respective contours most likely to be considered structurally significant are marked by means of arrows in Figure 3.2 below.

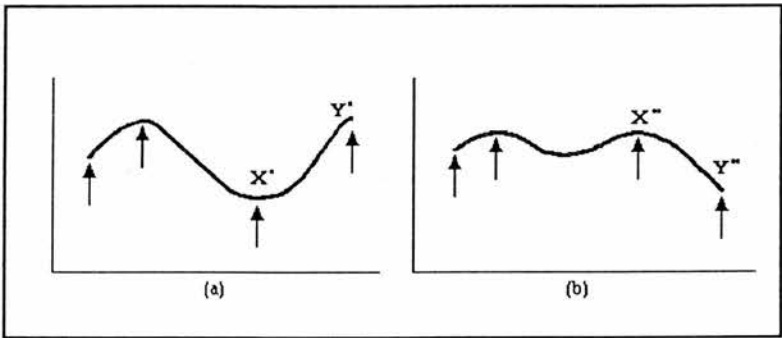


Figure 3.2

On the other hand, linguists in the British tradition were more concerned with identifying and describing **meaningfully distinctive** "tunes". The significant difference between the contours in Figure 3.1 is that between the stretch marked X' Y' in Figure 3.2 (a) and that marked X" Y" in Figure 3.2 (b). Differences in contour shape have often been found to accompany overall difference in meaning. Assuming such a

difference in fact to be the case, the portions marked X' Y' and X" Y" are the ones most likely to be considered relevant to bearing contrastive meaning by analysts working within the British tradition.

3.1.1 Components of the analyses

The American Structuralist school of the early fifties produced a whole series of descriptions, amongst which are those of Pike (1945), Wells (1945), and Trager and Smith (1957). These descriptive frameworks analyse the intonation of English in terms of four "tones" or pitch phonemes / 1, 2, 3, 4 /, with / 1 / representing the highest level in Pike, but the lowest in the description of Wells as well as that of Trager and Smith. The descriptions also provide for phonemes which occur at the boundaries of intonation units. Pike, for example, proposes the existence of two phonemes of terminal juncture / 1, 2 / while Trager and Smith use / 1, 2, # / to mark the boundaries between contours.

Tune descriptions of intonation tended to be the rule in the British tradition. Many of these descriptions had a pedagogical slant and put a certain onus on the identification of a set of intonational contrasts which would be useful in a language-learning context. The system devised by Armstrong and Ward (1926), for example, aims to help students of English acquire the principal contrasts needed in order to be able to communicate effectively by proposing an analysis in terms of two tunes, Tune 1 and Tune 2.

The basic "tune" component of Armstrong and Ward's analysis is present in other British analyses amongst which are those of Palmer (1922), Kingdon (1958), O'Connor and Arnold (1973) and Halliday (1967). Thus, for example, O'Connor and Arnold (1961:5) define the tune as "the complete pitch treatment of a sense group". An important development in the latter analyses is the assumption not merely of a tune as in Armstrong and Ward, but of an internal structure for tunes. The structures that have been proposed vary but usually include some or all of the following elements (cf. *inter alia* Couper-Kuhlen 1986:78):

(pre-head) (head) nucleus (tail)

The nucleus is essential to any intonation contour, whereas all the remaining elements are optional. Some of the postulated structures are shown in Table 3.1 below (cf. also Ladd 1980:16). Halliday (1967:13), for example, suggests the possibility of an optional pretonic followed by an obligatory tonic element, the term "tonic" being used with a virtually equivalent meaning to that of the term "nucleus" in other frameworks.¹

| | | | | |
|-------------------|---------------|--------|-----------------|---------|
| O'CONNOR & ARNOLD | (Prehead) | (Head) | Nucleus | (Tail) |
| HALLIDAY | (Pre-tonic) | | Tonic | (Tonic) |
| PIKE | (Pre-contour) | | Primary Contour | |

TABLE 3.1 The Structure of the Intonation Contour

As can be seen in Table 3.1, Pike's (1945:29) proposed division of what he calls a "total contour" into an optional pre-contour and an obligatory primary contour

¹ Halliday (1967:13) also allows for a possible structure involving an optional pretonic followed by two tonics (a "double tonic"). This will be discussed further in 3.3.2.

bears a striking resemblance to the observations of his British counterparts.

One of the differences between the Structuralist and the British views in so far as the structure of intonation contours is concerned stems from differing assumptions they make as regards the tones/tune components that make up such contours. Thus, while the Structuralists are more concerned with identifying the component parts or pitches that make up the intonation contour, analyses in the British tradition tend to give more importance to overall contour shape.

3.1.2 Anchoring points

The assumption that stressed syllables provide the location for the most important fluctuations in pitch in the intonation contour has long been implicit in descriptions of intonation. However there are clear differences in emphasis between the American and British traditions.

According to Wells (1945:35), for example:

If the utterance has only one loud stress, the place of the independent pitch phoneme coincides with the place of loud stress.

According to Pike (1945:27) the locations for the tones or pitches in the system are "end points, beginning points or direction-change points", referred to collectively as "CONTOUR POINTS". At least one of these contour points must be a stressed syllable. In fact Pike designates "a stressed syllable" as the "BEGINNING POINT for

every primary contour".

Stressed syllables also serve as locations for the attachment of the tunes in British analyses, the most important part of the intonation contour or "nuclear tone" (O'Connor and Arnold 1973) or "primary tone" (Halliday 1967) being attached to the "nucleus" and "tonic syllable" respectively.

3.1.3 Domain

Regardless of which approach to the analysis of intonation is adopted, a domain for the implementation of some chosen unit of intonation is assumed. However, speech is not easily divided into intonational domains as, while pausing often signals the end of one intonational domain and the start of another, this is not necessarily always the case.

Bing (1979) has outlined the varying assumptions made about the domain for the operation of intonation. She differentiates between two major schools of thought, that which assumes that the relevant domain is a unit smaller than the clause (mainly American) and that which assumes that the domain over which intonation extends is the clause (mainly British).

The assumptions in American style analyses about the domain within which their sequence of pitch movements take place are clear (even when undeclared). For example, Pike (1945) has two units, one which he calls the "intonation contour" and

the other which he calls a "rhythm unit". In the two examples from Pike (Pike 1945:36) given below there is a one-to-one correspondence between intonation contours and rhythm units:

Jim has gone!
3- °2- -4 //

Jim has gone!
°2-4-3 / 4- °1-4 //

Pike points out that the end of the rhythm unit corresponding to the end of the intonation contour on Jim in the second of the two examples quoted above, is indicated by means of a pause. Intonation contours and rhythm units do not necessarily coincide, however: for example, one rhythm unit can consist of two intonation contours as in the following example from Pike (1945:41):

Tom has gone!
°2-3 4- °2-4 //

Conversely, one intonation contour can consist of two rhythm units as in the following example (Pike 1945:40):

Tom has gone!
°2-4-/ -4- -4-3 //

The former instance of Tom has gone! clearly consists of two intonation contours in spite of the fact that no pause is present separating the two contours; on the other hand, in the second instance of the same example, the pause following Tom signals

a new rhythm unit but not a second intonation contour. The absence of a pause between the two intonation contours in the former instance of Tom has gone! and its presence midway in the intonation contour in the latter instance of the same example suggests that pause as a criteria for dividing speech into intonational units is not necessarily always a useful tool.

British analyses are more specific on the issue of domain. Thus, O'Connor and Arnold (1973) assume a domain co-extensive with the "tune". Halliday (1967) uses the term tone group to refer to the intonation domain. In his view, "tonality" is "neutral" when the tone group and the clause extend over the same stretch of speech.

One of the strengths in the Structuralists' work on intonation is their notion of pitch levels as relative. Thus, for example, Pike (1945:25) argues that a pitch level of 400 is high relative to one of 200 but low relative to one of 800 (*sic.*). In spite of its attractiveness however, the notion of differentiated pitch "levels" has been the subject of considerable contention, and this for two main reasons: first of all, for the decision to describe intonation in terms of four levels, in spite of insufficient justification for having four as opposed to some other number of levels; and secondly for the suggestion embodied in the four level approach that certain intonational contrasts of a phonemic nature are present where in fact this is not necessarily the case (Bolinger 1951).

The notion of "relative" pitches is crucial to the workings of frameworks in the tradition of intonational phonology, the seminal work in which is Pierrehumbert (1980). In recent work on intonation, the criticism against the choice of four "phonemic" levels of intonation is bypassed by means of the simple solution of the adoption of a binary system of tones (cf. for example Bruce 1977; Gussenhoven 1984; Ladd 1983; Pierrehumbert 1980).

Another important inheritance from the Structuralists is the idea of tonal elements attaching themselves to structurally significant points. Pike (1945:26) states that:

the pitch levels contribute end points, beginning points or direction-change points.

Most of the above systems similarly provide for the linking of tonal elements mainly to accented syllables (Pike's "direction change points") and to boundaries, (Pike's "end" and "beginning points"). The term most often used to refer to the tones which attach to accented syllables is **pitch accent**, originally due to Bolinger (1958), while those elements which attach to beginning and end points are commonly referred to as **boundary tones**.

It is to the Structuralist tradition that recent work on intonation is more greatly indebted. However, the value of the British insight into the existence of tonal configurations which constitute meaningfully distinct units has also been recognised (cf. for example Liberman 1979). This recognition has led to attempts at maximising the possibilities for capturing linguistic generalisations by incorporating into the framework the notion of tune.

While harking back to earlier work in both the Structuralist and British traditions and other more individual work such as Bolinger's (1958) concept of pitch accent, however, the substantial tradition of intonational research which has developed in recent years (cf. for example Liberman 1979; Pierrehumbert 1980; Ladd 1983) borrows heavily from work on the autosegmental treatment of tone (cf. for example Goldsmith 1979). It also makes extensive use of work in the traditions of metrical phonology (cf. for example Liberman and Prince 1977) and prosodic phonology (cf. for example Nespor and Vogel 1986). The resulting framework provides a useful means of representing observations about intonation encoded in both the American and the British frameworks of intonational research. An outline follows of some of the

important elements in the substantial tradition of intonational phonology that has emerged in recent years.

3.2.1 Intonational phonology and the components of analysis

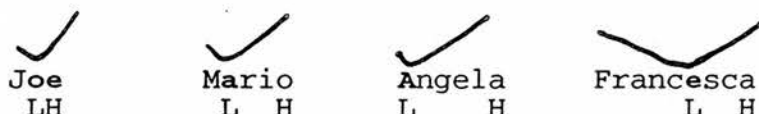
Recent work on intonation has drawn heavily on the work of the Structuralists especially in terms of what Ladd (1992:322) describes as "the most important tenet of the new phonological descriptions", this being the understanding of fundamental frequency (F0) as consisting of "*a sequence of discrete phonological events*, rather than as a continuously varying contour characterisable by overall shape and direction" (Ladd's italics).

A particularly robust framework of work on intonation has developed from the seminal work in autosegmental phonology by Goldsmith (1979) whose main thesis involves the notion of separate tiers for tune and text being linked by different forms of association.

The basic assumption of the models we are dealing with here, notably Pierrehumbert (1980), is that intonation can be analysed in terms of tunes represented as a series of tones (Ts) which are either Low (L) or High (H) (cf. Subsection 4.1.4 for a detailed description of the framework, based on Pierrehumbert's but with adaptations, used in this work). Separate tiers for tune and text are postulated and these are linked by rules of association. Thus, for example, let us assume a tune consisting of the tonal elements L H. One of the tasks of the description is to capture the generalisations that:

1. the tune consisting of this L H sequence of tones can be linked to segmentally different texts; and
2. this tune contributes a specific intonational meaning, different, for example, from that contributed by a H L tune.

The vowel of the stressed syllable in each of the following examples is indicated in **bold**:



Rules of association can be formulated as follows:

Associate L to the accented syllable.
Associate H to the phrase boundary.

Various devices are available for putting together an inventory of possible tonal entities. For example, most models distinguish starred tones (those attached to stressed syllables, T*s) from unstarred tones (those attached, for example, to phrase boundaries, T%s). Generalised association rules can be formulated as follows:

Associate T* to the accented syllable.
Associate T% to the phrase boundary.

On the basis of these rules, a L* H% representation follows for the tune in the above examples.

The model proposed by Ladd (1983) distinguishes phonological association from phonetic alignment. In this model, the phonetic mapping of the phonological entities in the system is indicated by means of features such as [\pm delayed peak], [\pm raised peak].

3.2.2 Metrical phonology and the skeletal structure

It is assumed that no model for the description of intonation would be complete without a statement of metrical and prosodic structure rules. Liberman and Prince's (1977) work on English stress remains the cornerstone for recent intonational models. This provides a framework for the representation of stress in terms of relations of relative prominence between two nodes in a binary branching structure. The strongest stress in any constituent is that which is governed by strong nodes. Liberman and Prince refer to these strongest stresses as designated terminal elements (DTEs). The metrical structure of any entity, and specifically the DTEs of that structure, serve as the locations for the anchoring of tonal entities, in other words they are the skeleton for the specification of the text-tune association.

3.2.3 Prosodic structure and intonational domains

The tradition of Prosodic Phonology looks at domain as being hierarchical in nature (cf. for example, Nespor and Vogel 1986). The advantages of proposing a hierarchical structure are that certain phonological processes can be explained as taking place at different levels of a tree-like structure. Analyses which emphasise the importance of

hierarchical prosodic structure in the specification of intonation are Ladd (1986), Beckman and Pierrehumbert (1986) and Grice (1992).

3.3. Nuclearity versus non-nuclearity

Despite the differences in emphasis made by different approaches, it is generally acknowledged that, in a series of pitch events, it is possible for certain events to be more important than others. In the British tradition, this "more important pitch event in the series" is the nucleus. However, as has often been pointed out (cf. *inter alia* Cruttenden 1990) although the term nucleus is more often linked with the British than with the American approach, Pike's "primary stress" is equivalent to the nucleus in British analyses.

3.3.1. The position of the nucleus in the utterance

Descriptions of the intonation of English normally also agree that the "more important event" in an intonation contour mentioned in Section 3.3 above tends to be that which occurs last. This observation has been made both by analysts in the Structuralist tradition and by those in the British tradition. Thus, according to Pike (1945:27):

It is at the ends of sentences that contours with the strongest meanings tend to occur.

O'Connor and Arnold's (1961:12) claim is couched in stronger terms, but is much the same in essence:

Clearly the stressed syllable of the last prominent word is a landmark of the highest importance, and it is on this syllable that the whole tune centres.

While it is generally agreed that the nucleus serves to signal the relative importance within the discourse of the relevant stretch of speech, the predominance of work on the intonation of English has resulted in an unfortunate tendency to equate "most important" with "last", and what's more, with "last, accented". Hence, for example, Ashby (1978:326) states categorically that:

The nucleus is thus the last accented syllable in the tone group.

The implication of Ashby's view is that it impossible for a pitch-bearing accented syllable to occur in post-nuclear position.

Few are those as radically against the possibility of anything happening after the nucleus as is Ashby. However, most theories assume either that the tail does not matter as it "never affects the intonation meaning" (O'Connor and Arnold 1973:29), or incorporate descriptions of the tail in those of the nuclear movements. One of the main problems in this regard is that most theories are resistant, to say the least, to the idea of post-nuclear accent-related entities. In many frameworks, while nuclear and pre-nuclear patterns are discussed and a notation developed for their description, post-nuclear patterns are glossed over.

In general in fact, there is a tendency in the literature of hedging around the issue of post-nuclearity. In view of the mention which was given to a number of possible ways for shifting sentence stress, and hence the location for the "more important pitch event", in Maltese, to a position in the sentence earlier than final position (cf.

Subsection 2.1.3), the treatment in the literature of post-nuclear stretches of speech or, to use the British term, "tails", will be discussed in some detail in Subsection 3.3.2.

3.3.2 Post-nuclear stretches of speech

Various attempts have been made at tackling what is involved intonationally in post-nuclear stretches of speech, particularly those which occur in the same intonational domain as the nuclear stretch.

For example, O'Connor and Arnold (1973) incorporate into their theory the possibility of an (optional) "tail" following the "nucleus". The "tail" consists of the syllables, all of which are supposed to be unstressed, following the nucleus. Post-nuclear stretches carrying a separate tune (i.e. stretches which **do** in fact contain a stressed syllable to which the tune can anchor) are accounted for as being part of some sort of "compound tune". O'Connor and Arnold (1961:28) give the example of contrasting versions for the utterance I like chocolate. having either a compound tune:

I `like ,chocolate.

or a simple Fall-Rise tune:

I 'like chocolate.

O'Connor and Arnold very clearly state that the compound tune in question (Tone

Group 10) consists of a "combination" of a falling tune and a rising tune, and this in terms of meaning as well as in terms of form. Compound tunes are treated as though they consist of two nuclear tones (simple tunes) separated by an invisible and imperceptible pause. In other words, the nuclear tones in question can be seen to have a certain separateness.

According to Halliday (1967:13), the tone group consists of an obligatory "tonic" and an optional "pretonic". No provision is made for any sort of "posttonic" but cases consisting of a tonic and a post-nuclear stretch are explained in terms of what Halliday calls a "double tonic". According to Halliday, it is the tonic which is selected to carry primary tone. When a double tonic is present, however, primary tone is selected twice.

Both double tonics and compound tunes consist of the combined meaning of the two separate tunes and in both cases the implication - whether intended or unintended is not the point - is that one tonic/simple tune in the double tonic/compound tune carries as much weight as does the other. Apparently, both double tonics and compound tunes are seen as consisting of two units, each of which is distinct in its own right, within the one unit.

It may be interesting, at this point, to quote Firbas (1979:126). Firbas defines "the intonation centre" as follows:

With, for the time being, one proviso, I regard the last nucleus within the distributional field as the most prominent prosodic feature and, following F. Daneš, refer to it as the intonation centre (=IC; cf. 1957:27, 153). As to the proviso, I do not regard as an IC a low rise after a fall.

What is interesting is his proviso that he does not consider as an intonation centre a "low rise after a fall". The similarity between this "low rise after a fall" and one of Halliday's (1967:13) instances of double tonic (notationally, 13), as well as to an instance of compound tune (High Fall followed by a Low Rise) documented by O'Connor and Arnold (1973:26-28) is striking. In all cases, the movement involved is a slight rise following an intonational fall earlier in the sentence.

In Halliday's and O'Connor and Arnold's accounts, the slight rise following the nuclear movement is explained away as though it consisted of a similar kind of tonal movement as did the tonal movement preceding it. Firbas, on the other hand, realises that this "low rise after a fall" does not function as do other tonal movements which can function as "intonation centres", but having made the observation, he then dismisses it without further comment. In other words, although he notes that the status of the low rise in question differs from that of the nuclear tone preceding it, he goes no further.

Liberman's (1979) analysis for cases involving post-nuclear stretches of speech differs from other analyses in that he suggests that, even if a pause doesn't surface, the only way of analysing certain structures is by inserting a kind of underlying pause. He proposes to analyse examples such as Sam struck out, my friend. in terms of a "word + affix structure" rather than a "word + word structure" (Liberman 1979:183). The

derivation he provides for Sam struck out, my friend, is reproduced as Figure 3.3:

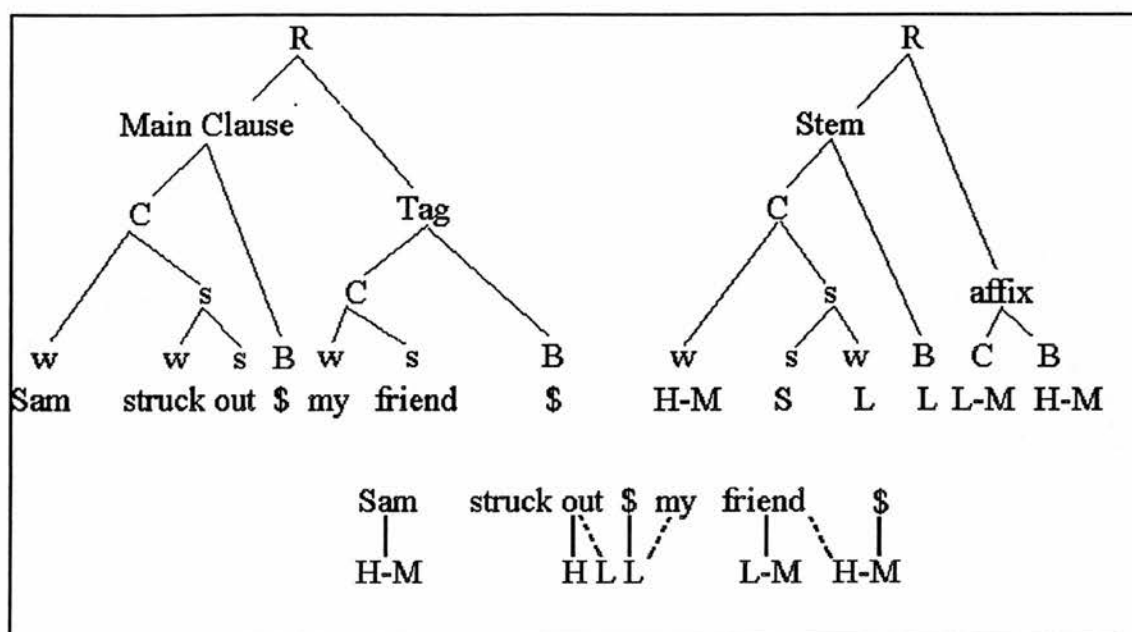


Figure 3.3 (Reproduced from Liberman 1979:187)

Liberman's suggests that "complex tonal patterns" are "more like an extension of an existing contour than like an additional independent contour".

Bing's (1980:97) analysis of intonation in terms of Class O (Outside) contours and Class I (Inside) contours is also interesting in this regard. Expressions which take Class O contours are intuitively independent of the sentences to which they are attached and make no contribution to the truth value of the sentence (vocatives in English, for example, fall into this class). Bing recognises the existence in English of contours which, although they do not take what she calls "prominence tones", nevertheless have a separate contour. It seems to me that Bing would class the post-nuclear stretches of speech being discussed in this section as Class O expressions

which could take a separate contour which however is not a "prominence" contour.


As noted in Subsection 2.1.3, constituent order variation in Maltese correlates with differences in intonational structure between the various constituent order possibilities. The differences in intonational structure which interest us here are those involving post-nuclear stretches of speech occurring within the same intonational domain as the nuclear stretch. Examples such as the one below from French:

Il a mangé le gâteau, Jean.

or the following one from English:

Sam won after all, he did.

involving dislocation and hence a separateness of Jean and he did from the rest of the sentence exist in Maltese. Thus for example:


Il-kelba, laqatha.

involves separate intonational movements in separate intonational domains on il-kelba and laqatha respectively. The example can be distinguished intonationally as shown from:


Laqatha l-kelba.

in which a nuclear stretch of speech on laqatha is followed by a post-nuclear stretch of speech within the same intonational domain on il-kelba. The former of these two examples is similar to the examples from French and English quoted above. Laqatha in Il-kelba, laqatha like Jean and he did in the French and English examples respectively, is separated from the rest of the sentence, not only by means of a pause, but also in that it carries a separate pitch movement. The latter of the two Maltese examples on the other hand, is not characterised by the same extrasentential separateness. Examples from Maltese involving the kind of dislocation as in Il-kelba, laqatha will be excluded from the discussion. Examples involving the kind of dislocation as in Laqatha l-kelba in which a post-nuclear stretch of speech occurs within the same intonational domain as the nuclear stretch of speech, on the other hand, will be discussed in detail.

Chapter 4

THE TONAL PHONOLOGY OF MALTESE

This Chapter presents a formal characterisation of the phonetics and phonology of Maltese intonation. The introduction of some basic contours available in Maltese in Section 4.1 is used as a launching pad for advancing theoretical concepts relevant to the description (Subsections 4.1.1, 4.1.2 and 4.1.3). The framework and notation, based on that developed by Pierrehumbert (1980) and others but adapted here to suit the requirements of the description is then described (Subsection 4.1.4). A proposal to explain the four principal tonal movements introduced in this section in terms of a distinction between two **independent** and two **dependent** tonal movements concludes the section. The concepts of metrical and prosodic structure introduced early in this section are applied to the set of utterances that serve as the main illustrative material for the following two sections (Subsection 4.1.5).

The introduction to the basic tonal contours available in Maltese in Section 4.1 is followed in Sections 4.2 and 4.3 by detailed descriptions of these contours in terms of their alignment with the segmental stream: the nuclear question and statement tunes are examined in Subsections 4.2.1 and 4.2.2 respectively while the post-nuclear question and statement tunes are examined in Subsections 4.3.1 and 4.3.2. Section 4.4 looks at a number of other tonal phenomena and relates the analysis of these phenomena to that of the tonal phenomena described earlier in the Chapter. Lastly, Section 4.5 takes a look at the implications of the analysis.

My analysis identifies a number of distinct tonal entities. It differs from other accounts in allowing the possibility for accent-related tonal entities to occur post-nuclearly. The existence of these post-nuclear pitch accents has implications for prosodic structure in Maltese. The evidence suggests that the domain of focus is the phonological phrase and that anything following the phonological phrase is extrametrical to that phrase but crucially within the intonational phrase. The description also provides evidence of a pitch accent which differs from the other pitch accents noted to occur in Maltese in that it is co-extensive with an intonational phrase. The description tries to account in a principled way for these various phenomena.

Apart from preliminary work in the area by Vella (1988b), this is, to my knowledge, the first attempt at a formal description of the intonation of Maltese. Previous work on the intonation of Maltese (cf. for example Fenech 1984) is limited to a few intuitive statements and a number of unproven claims. Other references to intonation are fleeting and consist mainly of comments relating to the use of intonation in distinguishing questions (specifically yes-no questions, although this is not always made clear) from statements (Brother Henry 1967; Cremona 1938; Fenech 1984; Sutcliffe 1936).

The description given in this Chapter is based on recordings of my own speech checked against recordings of two other speakers of Maltese. A recording of all the examples for which F0 contours are presented is attached. Pitch tracking and labelling of the F0 contours was carried out using ESPS-WAVES. While recordings of the examples in Sections 4.1 and 4.4 were made specifically for this work, the examples

in Sections 4.2. and 4.3 are based on data in Vella (1988b). The results for the phonetic detailing of the specific tonal units in Sections 4.2 and 4.3 are also based on data from Vella (1988b).

The few references to Maltese intonation available assume a dichotomy between "question intonation" and "statement intonation" which provides a useful platform for the discussion of two contours the existence of which is uncontroversial in Maltese.

To begin with then, let us take the yes-no²⁵ question:

- (1) **Kielet?**
'Has she eaten?'

and the corresponding statement:

- (2) **Kielet.**
'She has eaten.'

Both the above examples are penultimately stressed. In keeping with Ladd's (1980:31) definition of sentence stress as "the place where the greatest prominence of the rhythmic structure is associated with the nucleus of the intonational configuration", sentence stress in this work will be assumed to coincide with the DTE of the **s** node in the metrical hierarchy at the level of the phonological phrase. It will be indicated in **bold** both in the examples, and, when required, in the text. The place of the relatively weaker prominence, if there is one, of the rhythmic structure, the DTE of the **w** node also at the level of the phonological phrase, will be indicated by means

²⁵

I henceforward frequently refer to yes-no questions simply as questions.

of *italics* (cf. Subsection 3.2.2).

The F0 contour for Kielet? in Figure 4.1 consists of a rising movement which is typical of questions in Maltese. The tonal movement involved is one in which a low F0 turning point reached late on the stressed, first syllable, is followed by a sharp rising movement to the end of the utterance.

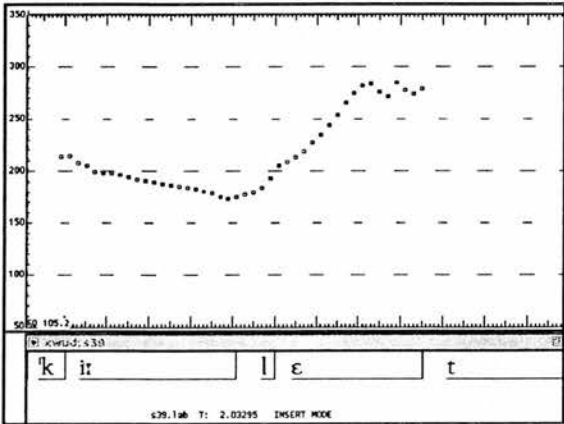


Figure 4.1 Kielet?

The information requested by the question in (1) could be supplied by a response as in (2) uttered as a neutral statement of fact.

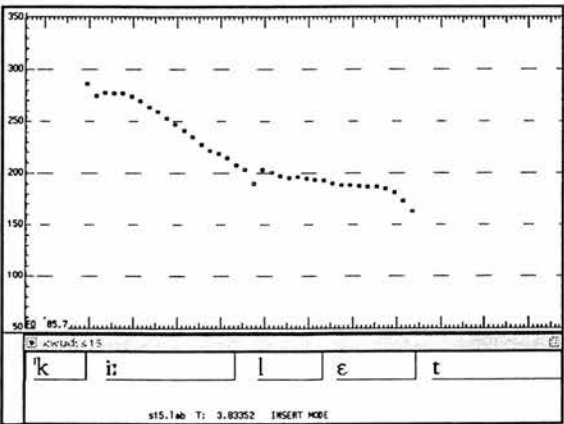


Figure 4.2 Kielet.

The F0 contour in this case consists of a falling movement starting from a high F0 peak early on the stressed syllable of kielet through to the end of the utterance.

A phonological contrast can therefore be seen to exist between the rising "question" contour and the falling "statement" contour, intonation in Maltese serving to differentiate yes-no questions from statements in the absence of grammatical cues of other kinds. Maltese is not alone in this respect, a fact which is attested by the substantial documentation in the literature (cf. for example Bolinger 1978, Cruttenden 1981) of the tendency in many languages for rising and falling contours to be used to differentiate yes-no questions from statements, both in languages that use morpho-syntactic means to signal grammatical meaning and in those which do not (Cruttenden 1986:161-162).

The contours introduced above can also feature as part of the intonational patterns exhibited by utterances longer than the one-word examples given earlier. For instance, a specific query as to whether the subject of the conversation has eaten a pizza is possible as in Example (3):

- (3) *Kielet* pizza?
 'Has she eaten a pizza?'

The F0 contour for this utterance in Figure 4.3 has a slightly higher F0 starting point on the first, stressed, syllable of kielet as compared with that on the unstressed syllable following. There is a further fall to a low F0 valley on the stressed syllable of pizza.

A rising movement then ensues to a peak in F0 at the end of the utterance.

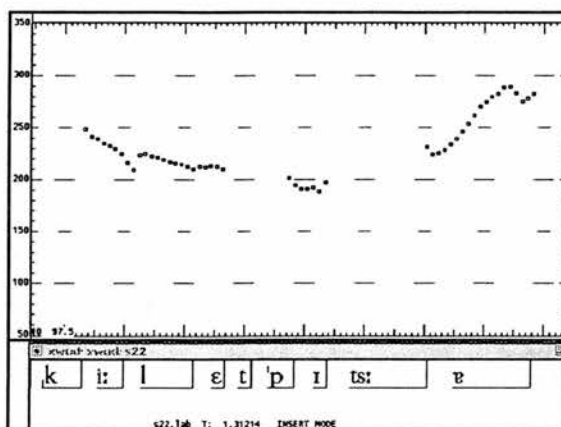


Figure 4.3 Kielet pizza?

In response to a query as to the reason for the absence from the family table of the subject of the conversation, a response as in Example (4) below is possible:

- (4) Kielet pizza.
'She's eaten a pizza.'

The F0 contour for the utterance, shown in Figure 4.4, has a F0 starting point similar to that of the contour in Figure 4.3. The F0 on the stressed syllable of kielet is sustained at more or less the same level on the unstressed syllable of kielet. There is then a high F0 peak on the stressed syllable of pizza followed by a fall to the end of the utterance.

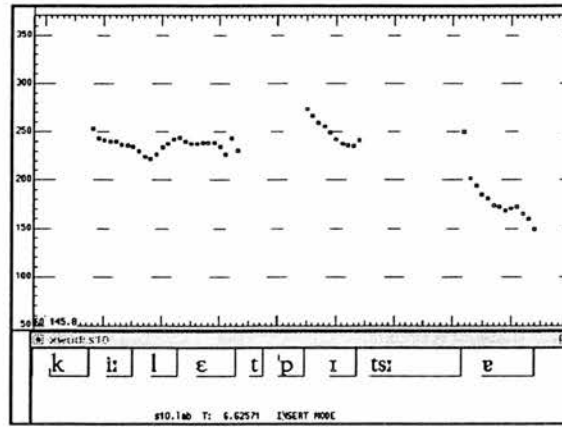


Figure 4.4 Kielet pizza.

Comparison of the earlier parts of the contours in Figures 4.3 and 4.4 shows that the F0 contour on kielet falls slightly in the former case but is sustained in the latter. The fall on kielet is followed by a low F0 valley in the former case but by a F0 peak in the latter. I suggest, however, that it is in fact the similarity between the earlier parts of these two contours that is striking and conclude the difference in realisation to be merely a matter of contextually determined phonetic detail. The latter parts of these two contours, on the other hand, are characterised by rising and falling contours similar to those in Figures 4.1 and 4.2 respectively. It is in their latter parts that these two contours contrast.

The question in (5) represents yet another possible way of questioning the absence of the subject of the conversation in a context such as that outlined earlier:

- (5) Rita kielet?
'Has Rita eaten?'

The F0 contour in Figure 4.5 shows that two tonal movements are involved, a falling movement similar to that in (2), followed by a rising movement similar to that for Example (1).

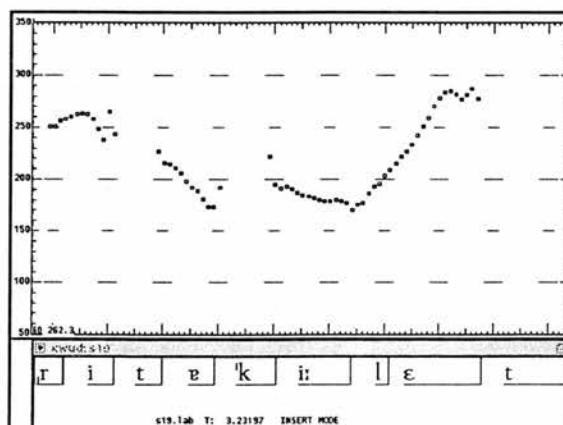


Figure 4.5 Rita kielel?

Rita, like kielel, is stressed on its first syllable. We note that there is a high F0 peak in the contour in the region of the first syllable of Rita followed by a fall. This is followed by a rising movement consisting of a low F0 turning point late on the stressed syllable of kielel and a rise to a final high thereafter. Unlike the fall on kielel in Example (3), the fall on Rita in this case ends lower in the pitch range than the beginning of the rising movement that follows it. The two tonal movements in this example in fact appear to be more separate than those in Example (3). This suggests that, contrary to what was proposed with regard to the fall on kielel in Example (3), the realisational details of the fall in F0 to the end of Rita in (5) above cannot be concluded to be merely contextually determined.

Rita's absence from the meal could be explained by means of a statement such as:

- (6) Rita kieleť.
'Rita has eaten.'

Unlike the tonal movement in the early part of the contour for Example (4), that on Rita in this example consists of a fall from a high F0 peak on the stressed syllable of Rita to a lower F0 at the end of Rita. Another high F0 peak in the contour is linked to the stressed syllable of kieleť and once again the contour falls to a final low F0 at the end of the utterance. As in the case of the previous example, I conclude that the F0 contour for Example (6) shown in Figure 4.6 consists of two separate movements, falling ones in both cases. Once again I conclude that the fall in F0 to the end of Rita cannot be ignored as mere context-dependent phonetic detail.

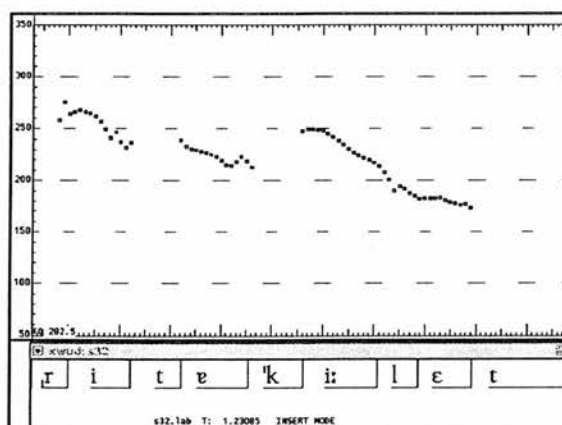


Figure 4.6 Rita kieleť.

The similarity between the earlier parts of the contours for Examples (5) and (6) is even clearer than that noted for Examples (3) and (4). Once again I conclude that it is in the choice of tune on their ends that the contours for Examples (5) and (6) contrast.

Earlier in this thesis (cf. Subsection 2.1.3) I discussed facts relating to the variability of constituent order in Maltese. Before outlining the theoretical concepts relevant to this description, let us examine the effect on intonation of constituent order reversal. Reverse constituent order versions are possible for all the examples in (3) to (6). However, although the syllabic structure of the sentences in (3) to (6) is the same as for their reverse constituent order versions in (7) to (10) below, the resulting utterances are intonationally distinct from their counterparts.²⁶

Let us examine the reverse constituent order version of (3) in (7):

- (7) Pizza kieleť?
'Is it a pizza she's eaten?'

The F0 contour for Example (7) is shown in Figure 4.7 below.

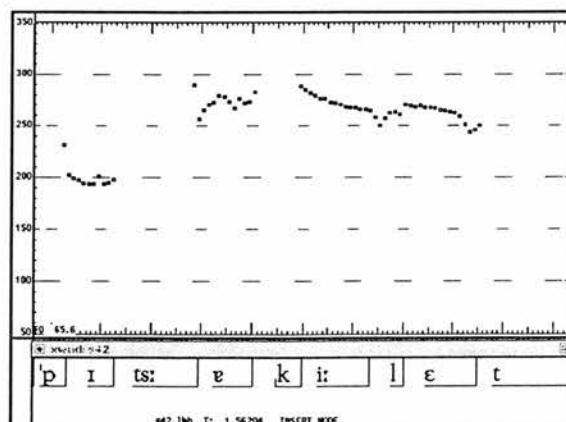


Figure 4.7 Pizza kieleť?

²⁶ The unwieldiness of some of the translations provided for the reverse constituent order examples is meant to give an indication of a certain markedness associated with the reversal of constituents which is rather difficult to translate (cf. Subsection 2.1.3).

It consists of a movement from a low F0 valley on the stressed syllable of pizza to a high F0 peak at the end of pizza continuing at more or less the same height on the stressed syllable of kielet and sustained to the end of the utterance. The rising movement on pizza is similar to the rising movements noted for Example (1) and at the ends of Examples (3) and (5) respectively. The contour on kielet with its high sustained F0, on the other hand, is distinct from any of the other tonal movements noted in the exposition so far.

Similarly, the reverse constituent order version of the statement in (4) shown in Example (8) is intonationally marked.

- (8) Pizza kielet.
'It's a pizza she's eaten.'

As can be seen in the F0 contour in Figure 4.8, a falling movement similar to that which originally came at the end of the example in Figure 4.4 is now present at the beginning of the sentence, starting on the stressed syllable of pizza. This falling movement is, however, not followed by another fall from a high F0 peak as in the examples in Figures 4.4 and 4.6 but rather by a definite low in the F0 contour on the stressed syllable of kielet which is itself followed by a subsequent slight sentence-final rise.

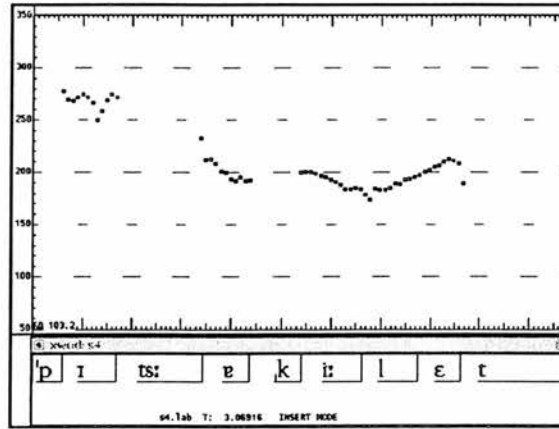


Figure 4.8 Pizza kiolet.

Reverse constituent order versions for (5) and (6) are also possible as in (9) and (10) below.

- (9) Kiolet Rīta?
'Has Rita eaten?'
- (10) Kiolet Rīta.
'Rita has eaten.'

As can be seen from Figures 4.9 and 4.10, the contours for the sentences in Examples (9) and (10) are similar to those for (7) and (8). The contour for (9) consists of a rising movement starting on the stressed syllable of kiolet. This is followed by a high F0 peak on Rīta sustained to the end of the utterance.

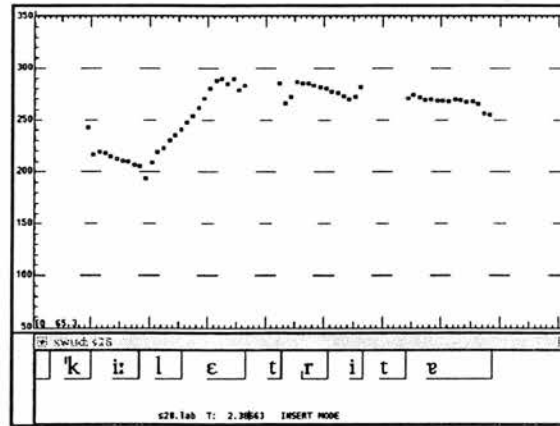


Figure 4.9 Kielet Rita?

The contour in Figure 4.10 consists of a high falling movement starting on the stressed syllable of kielet. This is followed by a low F0 on the stressed syllable of Rita followed by a slight sentence final rise.

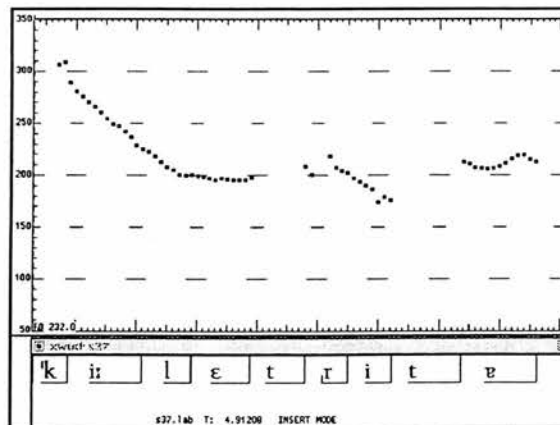


Figure 4.10 Kielet Rita.

An intonational effect similar to that observed in the F0 contours for the reverse constituent order statements in Examples (8) and (10) can be seen in the F0 contours

for examples such as that in (11) below:

- (11) Kilitha l-pizza.
'She's eaten the pizza'.

As noted in Subsection 2.1.1.4, the object clitic ha attached to the verb in Example (11) is co-indexed with the following object l-pizza, the latter being analysed as topic. The existence of intonational correlates to what is frequently referred to as clitic doubling is not unusual and in fact has been documented to be the case in, amongst others, languages such as Italian and Spanish (Sanfilippo 1990). The F0 contour for this example is shown in Figure 4.11 below.

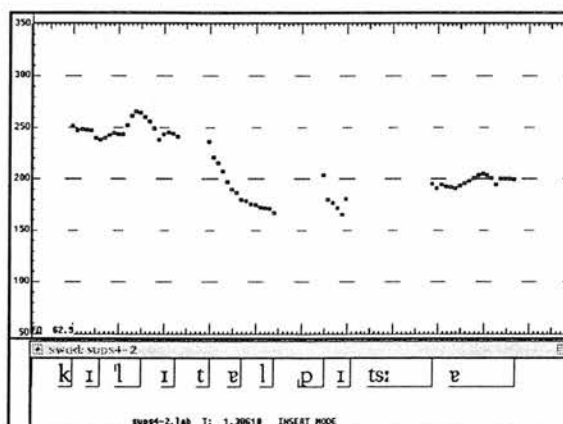


Figure 4.11 Kilitha l-pizza.

It consists of a falling movement starting from a high F0 peak on the stressed syllable of kilitha followed by a low F0 turning point on the stressed syllable of pizza from which a slight rise to the end of the utterance occurs, and as such is similar to the F0

contours for the reverse constituent order statements in (8) and (10).²⁷

Although little empirical work has been carried out as regards the role of variable constituent order in Maltese, Fabri's analysis discussed earlier suggests that the movement of constituents out of their unmarked position results in marked structures signalling effects such as contrastivity in some, but not all, cases. Thus, for instance, examples such as those in (3-6) are considered to be syntactically unmarked in Fabri's account while examples such as those in (7-8) are considered marked, this markedness being reflected also intonationally. The markedness of sentences such as those in Examples (7-8) was noted earlier (cf. Subsection 2.1.3) to have an effect of contrast.

The intonational markedness of the examples in (9-10), on the other hand, does not correlate with syntactic markedness since, in view of Fabri's conclusion that there is no fixed subject position, these sentences are analysed as being syntactically unmarked. Similarly the intonational markedness in Example (11) does not appear to correlate with syntactic markedness. In this case, the fact that the main intonational movement falls on kilitha rather than on il-pizza can be explained in terms of the topic status of il-pizza resulting from its being co-indexed with the object clitic ha.

I propose that the similarity in intonational effect in Examples (7-11) can be attributed to similarities in focus distribution. The examples in (7-11) differ from Examples (3-

²⁷ The F0 contour for a question version of Example (11), *Kilitha l-pizza?*, can likewise be expected to be similar to the F0 contours for Examples (7) and (9) respectively, consisting, as in the foregoing examples, of an early rising tune linked to the stressed syllable of kilitha followed by a high F0 peak on the stressed syllable of il-pizza sustained to the end of the utterance.

6) in that, while the whole sentence is in focus in the former set of examples, the examples in (7-11) are characterised by narrow focus occurring early in the sentence followed by a stretch of speech unmarked for focus.

I would like to stress that examples such as the above differ from examples in which an effect of contrast is brought about by an increase in emphasis rather than by syntactic means. An example involving an increase in emphasis on the already narrowly focussed pizza can be seen in (12), the increase in emphasis being shown by means of CAPITALS:

- (12) PIZZA kieleť.
'It is a PIZZA that she's eaten'.

The F0 contour for Example (12) shown in Figure 4.12 is similar to that for Example (8) in that it consists of a falling movement from the stressed syllable of PIZZA to the end of PIZZA. This is followed by a low F0 valley on the stressed syllable of kieleť and a sentence-final rise. Although it might be tempting, on the basis of examples such as this, to conclude that emphasis in Maltese affects intonation in ways similar to those identified earlier as resulting from narrow focus early in the sentence, a close examination of the contour for Example (12) is in order at this point. In order to facilitate comparison of the F0 contour for Example (12) with that for Example (8), the F0 contour for the latter is superimposed on that for Example (8) shown previously in Figure 4.8.

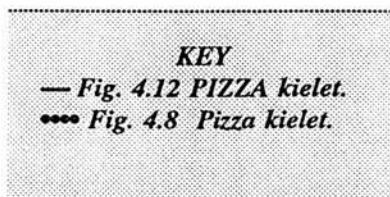
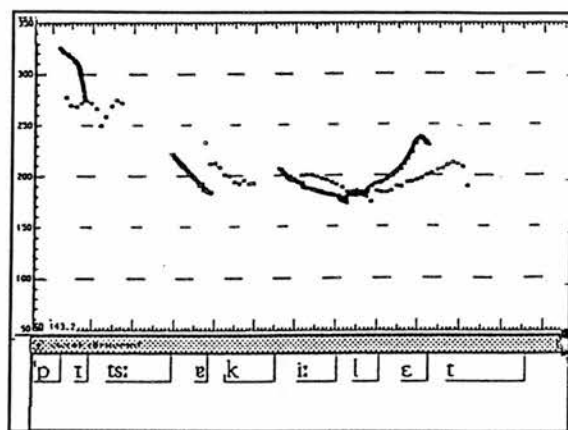


Figure 4.12

In spite of the similarities between the contours for Examples (12) and (8) noted above, it is possible to observe a general raising of the F0 contour for Example (12) as compared to that for Example (8). In particular, the peak in F0 on the stressed syllable of PIZZA in the contour for Example (12) is considerably higher than that on the stressed syllable of pizza in that for Example (8). Also, the rising sentence final movement has a higher F0 ending point in the emphatic than in the non-emphatic example.

The difference in the effect on intonation of narrow focus resulting from syntactic changes as compared to narrow focus resulting simply from an increase in emphasis becomes even clearer when we examine the F0 contour for a more emphatic version of Example (4) as for example in (13) below:

- (13) *Kieľet PIZZA.*
 'She's eaten a PIZZA'.

The contour for this example is shown in Figure 4.13. As in Figure 4.12, the F0

contour for the non-emphatic version of this example is shown earlier as Figure 4.4 is superimposed on the F0 contour for Figure 4.13.

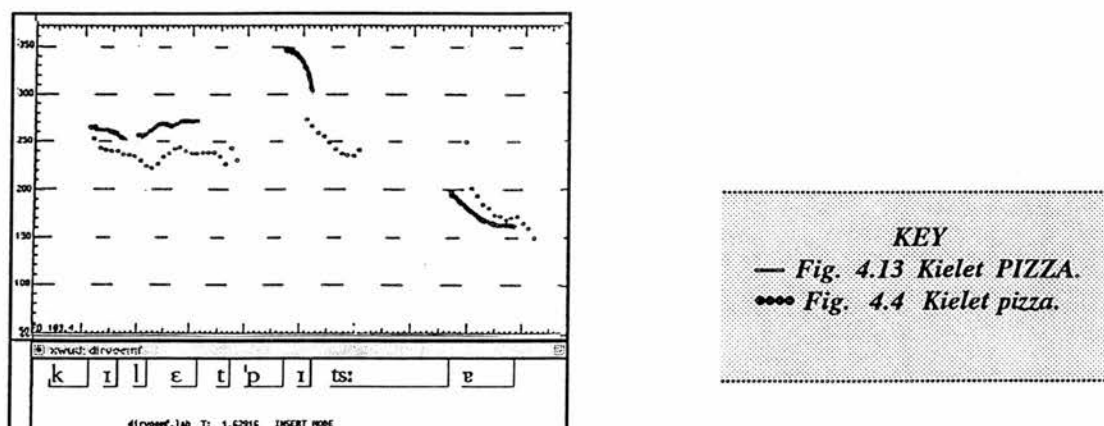


Figure 4.13

Like Example (8), Example (13) can be analysed as having narrow focus on the element pizza. An effect of contrast similar to that signalled by Example (8) is also signalled by Example (13). The F0 contour for Example (13) however, does not reveal any similarity with the contour for the reverse constituent order statement in Example (8). Rather, like the F0 contour for its non-emphatic counterpart, Example (4), the F0 contour for Example (13) consists of an F0 peak on the stressed syllable of kielet sustained at more or less the same height to the end of kielet, followed by a falling movement consisting of a high F0 peak on the stressed syllable of pizza falling to the end of the utterance. The difference between the contours for Examples (13) and (4) is once again mainly one involving a general raising of the F0 contour for Example (13) as compared to that for Example (4), together with an increase in the height of the F0 peak on PIZZA in the former case as compared to that on pizza in the latter.

Sentences such as those in Examples (12) and (13) with emphasis on PIZZA could be uttered in response to a question such as Kielet pizza? in which surprise was expressed at the fact that Rita ate a PIZZA, rather than, for example, a plate of spaghetti. Although it is clear that these examples, like Examples (7-8), signal an effect of contrast, the intonational means whereby this effect is brought about differs from that observed to be the case in Examples (7-11). I conclude that examples such as these do not contrast intonationally with their non-emphatic counterparts, the difference being more one in terms of "gradience" than of an "all-or-none" contrast (Bolinger 1961; Ladd 1980). The effect of narrow focus brought about solely by prosodic, as opposed to both prosodic and syntactic means, as for instance, in Examples (12-13), will not be considered further in this work.

Let us begin by assuming that the notion of a structure for tunes provides a necessary device for the description of intonation. The components I take to be relevant to the description of the tonal phonology of Maltese are optional pre-nuclear and post-nuclear components, and an obligatory nuclear component.

Pre-nuclear Nuclear Post-nuclear



The facts about the intonational patterns exhibited by the F0 contours for the foregoing examples can more clearly be explained in terms of such a structure for tunes. The contours in Figures 4.1 and 4.2 are clearly distinct, both in form (rising versus falling) and in function (question versus statement). In both cases there is one nuclear movement and this is linked to the sentence stress.

The rising movement as in Figure 1 reappears at the end of the contour in Figure 3, while the falling movement as in Figure 2 reappears at the end of the contour in Figure 4, linked, in each case, to the sentence stress. In both cases, it is these latter movements which have nuclear status. Similarly, nuclear rising and falling contours are found linked to the sentence stress at the end of the examples in Figures 4.5 and 4.6.

The high F0 peak on the stressed syllable of *kiele*t in both Figures 4.3 and 4.4 and the

falling tune on the stressed syllable of Rita in both Figures 4.5 and 4.6 are pre-nuclear.

As regards Examples (7) and (8), (9) and (10) and (11) the nuclear movements are those on the stressed syllables of pizza, kiolet and kilitha respectively. Post-nuclear tonal movements are present in all these examples. The form of these post-nuclear tonal movements varies according to whether they follow a nuclear rising movement as in (7) and (9) or a nuclear falling movement as in (8), (10), and (11). In the former case, the tonal movement involved consists of a high F0 peak on the stressed syllable of the post-nuclear component sustained to the end of the utterance, while in the latter, a low F0 can be observed on the stressed syllable of the post-nuclear component, and this is followed by a slight sentence-final rise.

Examples of post-nuclear movements on stretches of speech longer than the disyllabic ones in the examples above suggest that there is a trend for the form of post-nuclear tonal movements in Maltese to be dependent on whether or not the tonal movement appears in the context of a preceding nuclear question tune or whether it appears in the context of a preceding nuclear statement tune. Thus, for example, F0 contours for Examples (14) and (15):

- (14) Pizza kellha tagħmlilhom?
'Was it a pizza she had to make [for] them?'
(15) Pizza kellha tagħmlilhom.
'It was a pizza she had to make [for] them.'

are shown in Figures 4.14 and 4.15 respectively.

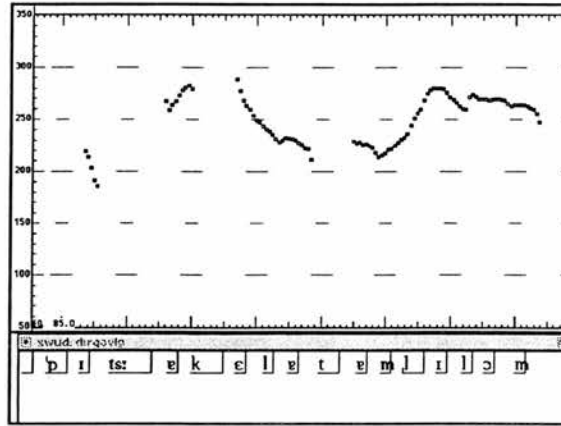


Figure 4.14 Pizza kellha tagħmlilhom?

The F0 contour for Example 14 has an early rising movement which coincides with the stressed syllable of pizza and rising to the end of pizza. A high level F0 similar to that occurring post-nuclearly in Examples (7) and (9) can be observed on the stressed syllable of tagħmlilhom in kellha tagħmlilhom sustained to the end of the utterance. This example differs from Examples (7) and (9) with respect to the number of syllables intervening between the end of pizza and the metrically strong syllable on tagħmlilhom in kellha tagħmlilhom. There is a fall in pitch immediately following the high F0 peak reached at the end of pizza; a low F0 contour then extends over the intervening segmental material preceding the stressed syllable on tagħmlilhom. As in the contours for Examples (7) and (9) however, the stepping up to the high F0 occurs on the metrically strong syllable of the post-nuclear stretch of speech.

The similarity between the contour for Example (14) and those for Examples (7) and (9) is mirrored by a similarity between the F0 contour for Example (15) and those for Examples (8), (10), and (11). The F0 contour for this example consists of a high F0

peak on the stressed syllable of pizza falling to, and beyond, the end of pizza until it reaches a low F0 valley on the stressed syllable of tagħmlilhom in kellha tagħmlilhom. A slight rise to the end of the utterance then ensues.

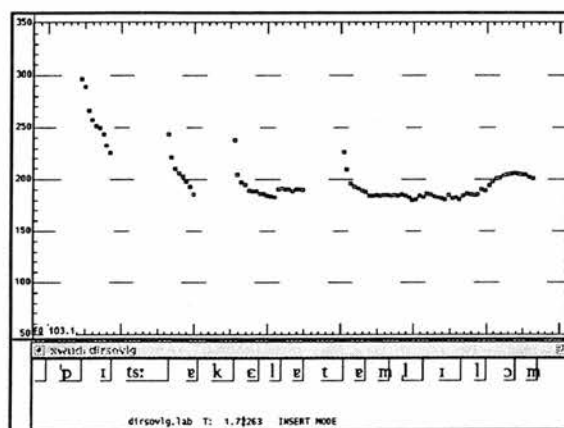


Figure 4.15 Pizza kellha tagħmlilhom.

As observed with reference to Example (14), Example (15) differs from the shorter sentences in (8), (10) and (11) in so far as the length of the post-nuclear stretch of speech is concerned. What is significant in this case is the fact that, although a potential location for a turning point in the F0 contour also exists on the lexical stress of kellha, the lowest point in the contour on the post-nuclear stretch of speech occurs on the metrically strong syllable of tagħmlilhom in kellha tagħmlilhom.

The observation made earlier that post-nuclear movements tend to take different forms depending on whether they follow a rising or a falling tune is not the only one that can be made. It can also be noted that, in spite of the excursion to the low F0 in the region intervening between the high F0 peak at the end of pizza and the metrically

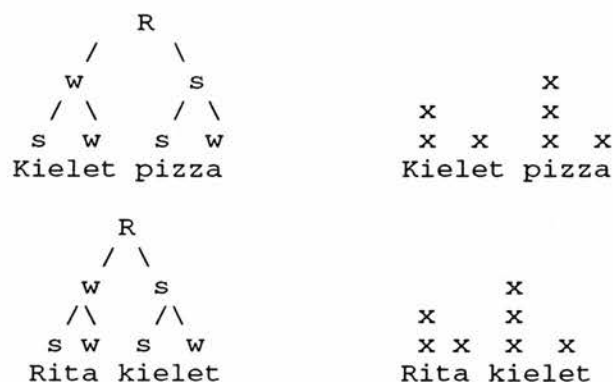
strong syllable on tagħmlilhom, the metrically strong syllable of kellha tagħmlilhom in Example (14) is characterised, like other examples involving a post-nuclear movement, by the presence of a high sustained F0 peak. Moreover, as in the earlier examples of this kind of contour, it is at the stressed syllable of kellha tagħmlilhom in Example (15) that the change in direction of F0 from low to slightly rising occurs. Both these facts lead me to suggest that the post-nuclear tonal movements in Maltese are linked to a stressed post-nuclear syllable and therefore cannot be dismissed as some kind of phrase final phenomenon.

Although there is nothing controversial about pre-nuclear tonal movements, the idea of post-nuclear accent-related tonal material is less well established. (Cf. Subsection 3.3.2 for a detailed discussion of views, some of them widely divergent from the position I am adopting, on the intonation of post-nuclear stretches of speech.) The data from Maltese strongly suggests, however, that not only is a stressed syllable an absolutely mandatory part of any nuclear component and possible, though optional, pre-nuclearly, but also that stressed syllables as potential bearers of tonal movement are possible post-nuclearly.

4.1.2 Metrical structure

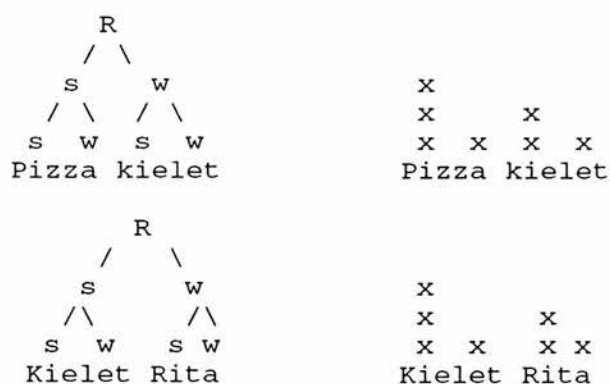
Lieberman (1979) and Liberman and Prince (1977) showed that metrical patterns are an essential component, even if on a separate level, of any description of intonation. Levels of metrical stress can be usefully indicated either by means of metrical trees (Lieberman and Prince 1977) or by means of grid notation (Prince 1983).

Representations of Examples (3)/(4) and (5)/(6) are given below:

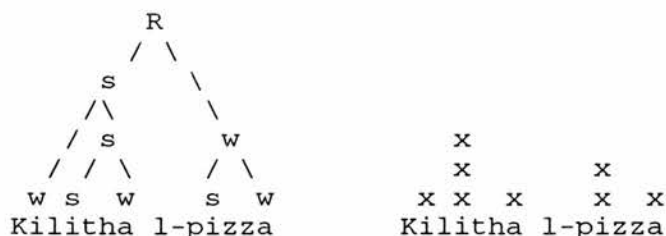


It can be noted that the stressed syllables of pizza in Kielet pizza and of kielet in Rita kielet, identified earlier in Subsection 4.1.1 as being the ones carrying the nuclear movements, coincide with the DTE of the s node in the w-s metrical structures for the above examples.

Examples (7)/(8), and (9)/(10) have metrical structures as follows:



while Example (11) has a metrical structure as follows:



The structure for these examples is one consisting of **s-w**, as is also that of Examples (14) and (15) for which examples full tree and grid representations have not been provided. As noted above with reference to the sentences Kielet pizza and Rita kielet in (3-6), it is once again on the DTE of the **s** node of the metrical structures for these examples that the nuclear movements for (7-11, 14-15) fall, no difference being evident between the **s-w** metrical structures resulting from reverse constituent ordering on the one hand and the **s-w** metrical structure for Kilitha l-pizza in Example (11) on the other.

Pre-nuclear and distinct post-nuclear tonal movements are linked in turn to the DTE of the **w** node representing the relatively weaker material of **w-s** and **s-w** structures respectively.

4.1.3 Prosodic structure

Let us now compare the contour for Example (5) to that for Example (3), and similarly with the contours for Examples (6) and (4). For ease of comparison, Figure 4.3 is superimposed on Figure 4.5 and presented below as Figure 4.3-5. Similarly Figure 4 is superimposed on Figure 6 and presented as Figure 4.4-6.

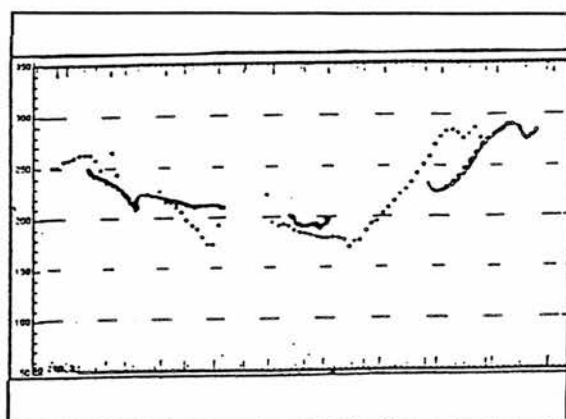


Figure 4.3-5

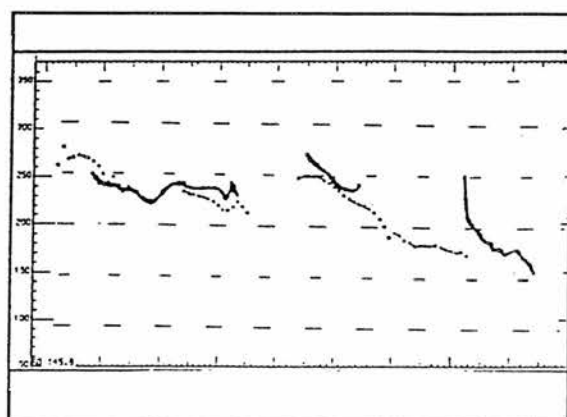
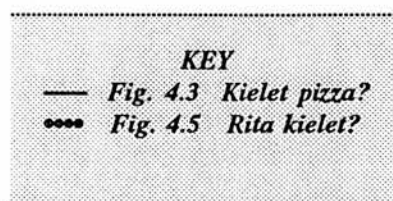
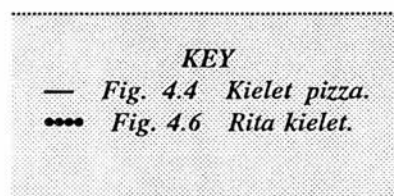


Figure 4.4-6



A sharp fall in pitch is present at the end of Rita, i.e. preceding the nuclear movement in both (5) and (6). The peak on kielet in Examples (3) and (4), on the other hand, is merely that, a peak, followed by, if anything, a slight sag prior to the next tonal movement. Moreover, this difference in intonation cannot be explained in terms of metrical structure since, as noted above, the structures involved can be analysed as *w-s* in all cases. An explanation accounting for the differences must therefore be sought

elsewhere. The sharp fall in pitch following Rita in the latter pair of examples suggests that an answer to the problem is possible if reference is made to some notion of prosodic structure.

Evidence for the existence of a hierarchical prosodic structure is presented in Selkirk (1984), Ladd (1986), Nespor and Vogel (1986) and Pierrehumbert and Beckman (1988). I suggest that a similar prosodic structure exists in Maltese and that this may help explain certain facts about the intonation of Maltese which would otherwise be inexplicable (cf. below for discussion). The relevant levels for my purposes are those of the phonological phrase (_p), and the intonational phrase (_i).

Thus, assuming such a prosodic hierarchy, I propose the following structure for Examples (3) and (4):



as opposed to a structure such as the following for Examples (5) and (6):



or, using bracket notation:

[[Kielet pizza]_P]_I
 [[Rita]_P[kielet]_P]_I

The presence/absence of a fall from the high F0 peaks on the stressed syllable of Rita in Examples (5) and (6) as opposed to following the high F0 peaks on the stressed syllable of kielet in (3) and (4) could then be explained as being the result of the realisation of tone at the boundary of the phonological phrase comprising [Rita]. In view of this I take the position that the presence of pre-nuclear falling movements on Rita in both (5) and (6) suggests that the realisation of a fall from a high F0 peak as opposed to merely a high peak as in (3) and (4) is determined by factors of phonological phrasing, rather than by whether the tune in question is pre-nuclear or nuclear.

A preliminary proposal as regards phonological phrasing in Maltese can be made in terms of the framework suggested above. An intonational phrase consists of one or more phonological phrases. The following structures are possible:



The above, however, do not account for examples such as those in (7-11, 14-15), the most obvious analysis for which would be one in terms of either of two possibilities:

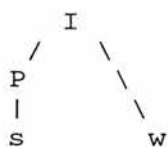


An analysis of examples such as those in (7-11, 14-15) in terms of a branching s-w phonological phrase suggests that a certain amount of interdependence exists between the s and the w material in the phonological phrase. The tunes observed to characterise kielet in both question and statement versions of Pizza kielet, Rita in Kielet Rita, kellha tagħmlilhom in Pizza kellha tagħmlilhom and pizza in Kilitha l-pizza do in fact suggest that the choice of tune on the respective post-nuclear stretches of speech is dependent on the choice of preceding tune. Thus, in the case of Pizza kielet?, Kielet Rita? and Pizza kellha tagħmlilhom?, sentence initial nuclear rising tunes are followed by high tunes, while in the case of the corresponding statements and Kilitha l-pizza sentence-initial nuclear falling tunes are followed by low, slightly rising, sentence-final tunes. An analysis of examples such as those illustrated here in terms of a s-w phonological phrase would require that the dependence of the w on the s material be matched by a similar dependence of the s material on the w. Judging from the facts noted above, this is not in fact the case: the choice of tune on the w post-nuclear material is dependent on the choice of nuclear tune on the preceding s material but not vice-versa.²⁸ I conclude that the s material is not dependent on the w in the same way as is the w on the s in these examples and reject an analysis in terms of a branching s-w phonological phrase.

²⁸ The fact regarding the relatively greater phonological independence of the s material as compared to the w is matched by a greater independence of this s material as compared to the w even from the syntactic and discourse structure points of view (cf. Section 2.1, in particular Subsection 2.1.3).

An analysis of Examples (7-11, 14-15) in terms of a *s* phonological phrase followed by a *w* phonological phrase, on the other hand, suggests that the *w* phonological phrase is equal in status to the preceding *s* phonological phrase since one could argue that the *w* material is like the *s* in being capable of forming a separate phrase. This prediction also is falsified by the data as the tunes on pizza and kiolet and kilitha are potentially independent of their respective post-nuclear adjuncts. An analysis of examples such as those in (7-11, 14-15) in terms of an intonational phrase consisting of a *s* phonological phrase followed by a *w* phonological phrase must therefore also be rejected.

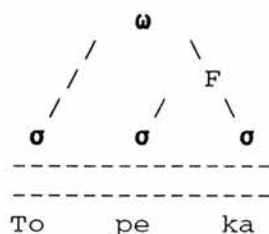
In view of the above I suggest that a distinction between domains containing essentially **independent** and essentially **dependent** material is crucial to the analysis of intonation in Maltese. The solution I am proposing here captures this observation about the prosodic organisation of Maltese. It involves adopting a structure in which the *w* material in *s-w* combinations assumes a dependency on the preceding *s* material while at the same time lying outside the phonological phrase to which this *s* material belongs, thus:



Using bracketing, the following structures result:

[[Pizza]_P kiolet]_I
 [[Kiolet]_P Rita]_I
 [[Kiltiha]_P l-pizza]_I

Although this solution is unorthodox, particularly in that it violates the Strict Layer Hypothesis (first proposed by Selkirk 1984 and reformulated by Nespor and Vogel 1986), it finds a precedent in work by Liberman (1979), Hyman, Katamba and Walusimbi (1987) and Pierrehumbert and Beckman (1988). The latter propose a structure for the word Topeka as follows:



in which the first syllable of the word (ω) Topeka is extrametrical to the foot (F). The structure I propose to complete the inventory of possibilities in Maltese involves an extension of the notion of extrametricality to the upper levels of the hierarchy so that anything to the right of the strongest phonological phrase is extrametrical to that phonological phrase but crucially within the intonational phrase which is the domain of the tune.

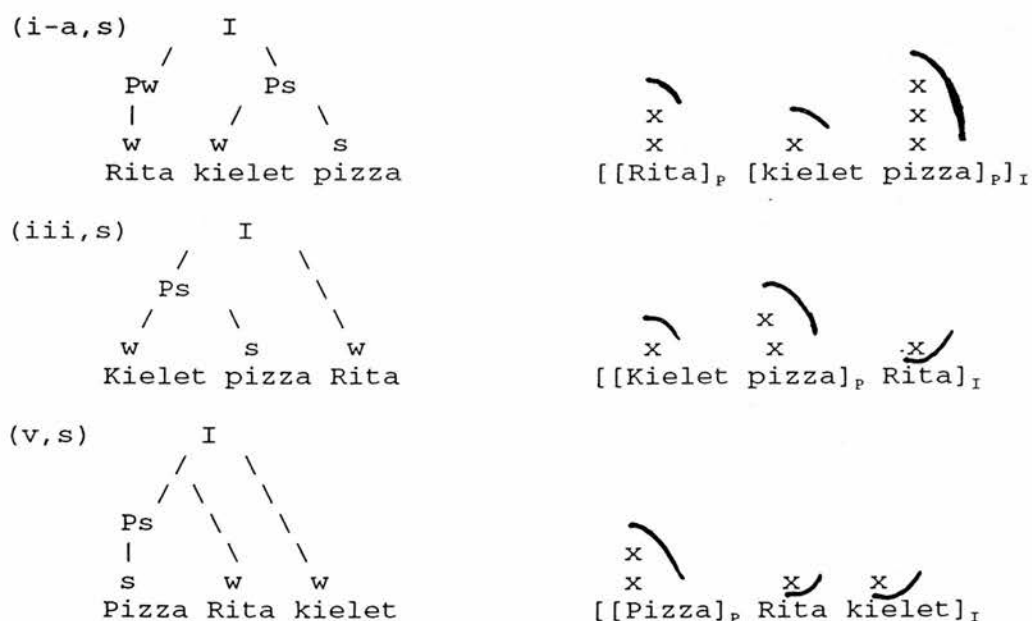
Let us now apply the above to the various possible constituent order versions of a "neutral", normal stress sentence, Rita kiolet pizza. Metrical and prosodic structures represented as trees are given below for each example. It will be remembered (cf.

Subsection 2.1.3) that both Borg (1988) and Fabri (1993) report VSO constituent order structures to be ungrammatical. A structure for *Kielet Rita pizza, the VSO version of the above sentence, will therefore not be provided at this point. Rough indications of acceptable intonational forms for question versions of each example are given on the grids alongside each tree. Once again the lowest level in the hierarchy is that of the word.

- (i-a)
-
- (ii)
-
- (iii)
-
- (iv-a)
-
- (v)
-

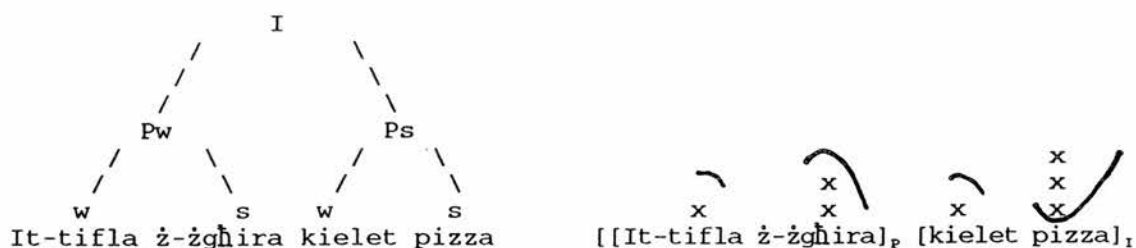
In all the above cases, each w extrametrical element is accompanied by a high

sustained F0 peak as noted earlier at the ends of Examples (7), (9) and (14). The w extrametrical elements in statement renderings of the different constituent order versions of Rita kiolet pizza would also be singled out intonationally. However, the tonal movement on these w extrametrical elements would be a low slight rising tonal movement as noted sentence finally in Examples (8), (10), (11) and (15). Representative examples giving a rough indication of acceptable intonational forms for statement versions of (i-a), (iii) and (v) are given alongside the metrical and prosodic structure representations in (i-a,s), (iii,s) and (v,s) respectively.



An observation that can be made with reference to the above is that w phonological phrases do not seem to branch. Examples of combinations such as [N-Adj] in which the w phonological phrase **does** branch, always involve branching as w-s, never as s-w. For instance, as can be seen from the metrical and prosodic representation given

below, there is w-s branching within the w phonological phrase it-tifla ž-žghira 'the small girl' in It-tifla z-žghira kiolet pizza. A rough indication of an acceptable intonational form for a question version of this sentence is also given.



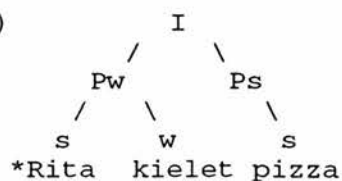
Assuming a possible version of this sentence with focus on IT-TIFLA, the following structure results:



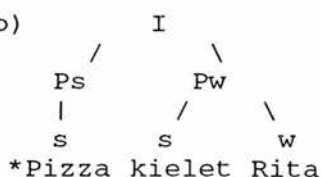
As in previous examples, a rough indication is provided of an acceptable intonational form for a question version of the sentence. Although kiolet pizza forms a constituent having its own internal w-s structure, it is treated in much the same way as is the extrametrical ž-žghira: both the w extrametrical elements ž-žghira and kiolet pizza are accompanied by a high sustained F0 peak as seen earlier accompanying the w extrametrical elements in questions.

This observation can be reformulated as a condition of well-formedness restricting the branching of *w* phonological phrases only as *w*-*s*. Alternative possible analyses of (i-a) and (iv-a) as shown in (i-b) and (iv-b) below can be invalidated in terms of this condition. The rough indications for possible intonational forms for questions provided in this case assume tunes for the final element in *s* phonological phrases and for *w* extrametrical elements similar to those accompanying similar elements in the examples illustrated earlier:

(i-b)



(iv-b)



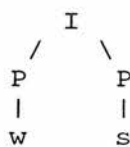
A phonological explanation for the anomalous nature of VSO structures is also possible in terms of the above analysis. This can be illustrated with reference to *Kiolet Rita pizza. As shown in (vi) below, the only phrasing possibility for this sentence would necessitate branching of the *w* phonological phrase and hence an intonational form roughly as indicated.

(vi)



The reason *Kielet Rita pizza fails, whereas Rita kielet pizza and Pizza kielet Rita with phrasing as in (i-b) and (iv-b) respectively do not, is that alternative phrasing strategies as in (i-a) and (iv-a) are available for (i) and (iv) but not for (vi).

By virtue of the above we can summarise the possibilities for prosodic structure in Maltese. These consist of the following three options:



I propose to refer to those post-nuclear contours which can only occur as extrametrical adjuncts to s phonological phrases as **dependent**; other contours will be referred to as **independent**. The distinction expressed here is similar to ideas expressed by Liberman (1979) and Bing (1979) and discussed in Subsection 3.3.2.

The description of the basic tonal phenomena identified for Maltese which follows will be based on the framework and notation developed by Pierrehumbert (1980) and others. It will be assumed that intonation can be analysed in terms of **tunes** represented as sequences of **tones** (Ts). In the case of Maltese, as also in many other languages analysed within this framework (cf. for example, Pierrehumbert and Beckman for Japanese 1988, Hayes and Lahiri 1991 for Bengali) Ts can be either High (H) or Low (L). Ts linked to stressed syllables, sometimes referred to as **pitch accents** following Bolinger (1958), will be referred to as starred Ts (notationally T*) and distinguished from those linked to syllables other than stressed syllables which will be referred to as unstarred.

A preliminary interpretation of the informal descriptions of the basic contours introduced in Section 4.1 above is given below.

The tune on Kielet? in (1) can be analysed as consisting of a L H sequence of tones. More specifically, and assuming the starred/unstarred distinction, the fact that the rising movement starts at the stressed syllable prompts a L* H analysis. The contour on Kielet. in (2) can similarly be analysed as H* L.

Initial interpretations of (3-14) are given below:

| | Pre- | Nuclear | Post- | | Pre- | Nuclear | Post- |
|----|--------------|----------------------------------|---------------|----|--------------|---------------------------------|------------------|
| 3 | Kielet H* | pizza? L*H | | 4 | Kielet H* | pizza. H* L | |
| 5 | Rita H*L | kielet? L*H | | 6 | Rita H*L | kielet. H* L | |
| 7 | | Pizza L*H | kielet? H* | 8 | | Pizza H* L | kielet. L* H |
| 9 | | Kielet L*H | Rita? H* | 10 | | Kielet H* L | Rita. L*H |
| | | | | 11 | | Kilitha H*L | l-pizza. L* H |
| 14 | | Pizza kellha tagħmlilhom? L*H | L H* | 15 | | Pizza kellha tagħmlilhom. H* | L* H |

Such an analysis raises two main problems. The first of these is that the notation suggests that pre-nuclear H* contrasts with H*L. In so doing it fails to capture the role of phonological phrasing in the realisation of the L tone in examples such as (5) and (6) as compared with the lack of such a L tone in examples such as (3) and (4) (cf. Subsection 4.1.3).

Secondly, and more importantly in the context of this work, it is impossible to capture the distinctness in the form of the post-nuclear tonal movements using devices postulated so far. Thus, there is nothing in the notation to show how nuclear L* H differs from post-nuclear L* H. Neither is it possible, using the above notation, to capture the difference between pre-nuclear H* which is subject to a lowering in F0 even when not followed by a phrase boundary as in (3) and (4), and H* in the post-nuclear tonal movements in (7), (9) and (15) which is sustained to the end of the utterance.

Apart from the distinction between starred tones and unstarred tones, Pierrehumbert (1980) makes a further distinction amongst unstarred tones in English, adapted from Bruce's analysis of Swedish (1977), namely a distinction between phrase-accent tones (notationally T^*) and boundary tones (notationally $T\%$). Although evidence for the validity of the distinction between phrase accent tones and boundary tones has been clearly demonstrated for Swedish (Bruce 1977), the evidence for their existence in English is not convincingly motivated in Pierrehumbert (1980). In later works, however, notably Beckman and Pierrehumbert (1986) and Pierrehumbert and Beckman (1988), phrase accent tones are convincingly reinterpreted in terms of their being linked to the edges of what are called "intermediate phrases" and "intonation phrases" respectively (for a full treatment of this reinterpretation cf. Grice 1992). These terms correspond to what Nespor and Vogel (1986) refer to as "phonological phrases" and "intonational phrases" respectively and it is this latter terminology, abbreviated as in Hayes and Lahiri (1991) to P-phrases and I-phrases respectively, that I will use. I will distinguish between starred tones and unstarred tones. Amongst unstarred T s I will distinguish between those with P-phrase status (T_p) and those with I-phrase status (T_I), the distinction being made in terms of how the respective tones are linked to the text. Preliminary text-tune association rules can be proposed as follows:

Associate T^* with a stressed syllable.
Associate T_p with a P-phrase boundary.
Associate T_I with an I-phrase boundary.

In cases of unstarred tones identified as boundary T s pending categorisation as either T_p s or T_I s, the notation $T\%$ will continue to be used until such further categorisation

becomes possible. T% will also be used as an umbrella notation for boundary Ts in cases where it is the fact of a T's boundary status which is important and not its specific categorisation as either T_p or T_i.

Work in this tradition (cf. for example Pierrehumbert 1980) has also posited the existence of bitonal pitch accents, characteristically a sequence of two Ts in which a rapid change in pitch occurring immediately preceding or immediately following the starred tone (T+T* or T*+T), necessitates a treatment of the two tones as a single entity.

The initial interpretations of (1-11, 14-15) earlier in this section cannot yet be updated in terms of the descriptive framework outlined above since the limited data examined thus far, although allowing for a categorisation of Ts into starred and unstarred Ts, does not make possible a further categorisation of unstarred Ts into those which form part of a bitonal entity and boundary Ts, be they T_p or T_i. In order for such a categorisation to be possible, a closer examination of the alignment with the segmental stream of the various entities is required. Such an examination will be explored in Section 4.2 and Section 4.3 below based on the body of data analysed as part of my earlier work in the area (Vella 1988).

4.1.5 Summary

This section has proposed the existence in Maltese of contrasting **independent** question and statement tunes and corresponding **dependent** tunes. The distinction is a crucial

one in the context of this work and a quick summary will therefore be useful at this stage.

To recapitulate therefore, independent tunes have been noted to occur nuclearly. In pre-nuclear position, the statement tune has been observed to be realised as a high peak in the absence of a phrase boundary but as a falling tune in the presence of a boundary. Although in principle, it should be possible for the question tune to occur pre-nuclearly as well as nuclearly, examples of pre-nuclear question tunes are not forthcoming on the basis of the data in this analysis. As for the dependent tunes, these consist of the two distinct post-nuclear movements noted to occur systematically in the data in this analysis. These tunes are contextually determined, choice of one as opposed to the other depending on whether they occur following a rising tune or following a falling tune.

In the following sections I examine in greater detail the realisation of these independent and dependent components of questions and statements in terms of their alignment with the segmental stream. The F0 contours illustrating the text are based on examples taken from Vella (1988), presented here in a format which is compatible with that of the rest of my data. The quantitative evidence presented in Section 4.2, Subsections 4.2.1 and 4.2.2 is based wholly on analysis of the body of data involving Speaker 1 in Vella (1988).

Although supplementary examples will be presented where additional evidence is necessary to illustrate the points being made, the section is exemplified by a number

of key examples, these being question and statement versions of the following:

- | | |
|----------------------------------------|---------------------------------------|
| (16/22) L-ikel sar?/. | (19/25) Sar l-ikel?/. |
| (17/23) Il-bastimenti Svediži telqu?/. | (20/26) Telqu l-bastimenti Svediži?/. |
| (18/24) Tħobb il-mużika klassika?/. | (21/27) Il-mużika klassika tħobb?/. |

These examples are representative of various segmental, metrical and prosodic possibilities with which the tunes identified could be expected to be linked. The possibilities are limited by virtue of certain facts about the structure of Maltese. Thus, since some kind of phrase stress, be it P-phrase stress or I-phrase stress, always falls on the word preceding the boundary and since lexical stress is unlikely ever to occur further than three syllables from the end of a word, the examples chosen to illustrate the text consist of structures having phrases ending in finally, penultimately and antepenultimately stressed items. Metrical and prosodic structures for the above mentioned examples as in the account of metrical and prosodic structure in Maltese in sections 4.1.2 and 4.1.3 are given below, those for Examples (16/22), (17/23) and (18/24) being shown on the left, and those for Examples (19/25), (20/26) and (21/27) on the right.

| | |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| $\begin{array}{cc} & x \\ x & x \\ [[L-ikel]_P [sar]_I] \end{array}$ | $\begin{array}{cc} & x \\ x & x \\ [[Sar]_P l-ikel]_I \end{array}$ |
| $\begin{array}{ccccc} & & x & x & \\ & x & x & x & \\ [[Il-bastimenti Svediži]_P [telqu]_I] \end{array}$ | $\begin{array}{ccccc} & x & & & x \\ & x & & & x \\ [[Telqu]_P il-bastimenti Svediži]_I \end{array}$ |
| $\begin{array}{ccccc} & & x & & \\ x & & x & & \\ x & x & x & & \\ [[Tħobb il-mużika klassika]_P]_I \end{array}$ | $\begin{array}{ccccc} & & x & & x \\ & & x & & x \\ & x & x & & x \\ [[Il-mużika klassika]_P tħobb]_I \end{array}$ |

In spite of the differences between the structures for Examples (16/22), (17/23) and (18/24) and those for Examples (19/25), (20/26) and (21/27), a number of similarities can be noted. Two of these similarities are important for our purposes. First of all, the DTE of the *s* node falls on the stressed syllables of sar, telqu and klassika respectively in Examples (16/22), (17/23) and (18/24) as also in Examples (19/25), (20/26) and (21/27). Secondly, P-phrase boundaries are present at the right edges of sar, telqu and klassika in both sets of examples. These observations conform with those made earlier in Subsection 2.1.3 regarding the effect constituent order changes have of shifting focus, and hence the nuclear intonational movement, to a position earlier in the sentence than at its end. We observe that the P-phrase boundaries in the above coincide in all cases with the rightmost edge of the domain of focus, be it late as in Examples (16/22), (17/23) and (18/24) or early as in Examples (19/25), (20/26) and (21/27).

A truism which I have failed to capture in my account so far can now be noted and a generalisation drawn to the effect that the nuclear tune is **always** attached to the final P-phrase within the I-phrase. The following rules can be formulated:

P-Phrase Stress

Stress in the P-phrase falls on the stressed syllable closest to the end of that P-phrase.

I-Phrase Stress

Stress in the I-phrase falls on the stressed syllable of the final P-phrase within that I-phrase. When the final, main stressed P-phrase is not I-phrase final, secondary stress falls on the stressed syllable closest to the end of that I-phrase.

In other words, within each phonological phrase, stress falls on the strongest syllable of the last element in that P-phrase domain. Within each intonational phrase, on the other hand, stress falls on the last phonological phrase within the domain even if this is not I-phrase final. I-phrases having a non-final stressed P-phrase also carry secondary stress on the strongest syllable of the last element in the I-phrase domain. In this work I claim that the domain of focus in Maltese is the P-phrase. Evidence for this claim is provided later in this Chapter.

4.2 Independent tunes

The description of the independent question tune in Subsection 4.2.1 below will concentrate on the nuclear tune while that in Subsection 4.2.2 will describe both nuclear and pre-nuclear patterns of realisation.

4.2.1 Nuclear question tune

As observed in Subsection 4.1.4 with reference to the introductory examples in Section 4.1, a possible characterisation of the distinctly rising shape of the nuclear question tune in Maltese is one consisting of a L H sequence of tones. The fact that the L tone in this tonal sequence associates with the stressed syllable of the nuclear stretch of speech prompts an analysis of this tone as L*. The status of the H tone in the sequence as either a boundary tone or as a trailing tone in a bitonal entity, on the other hand, is yet to be determined. Let us therefore begin by examining the alignment of the nuclear question tune when it occurs finally within the I-phrase in a number of examples having different segmental structures.

An example of the nuclear question tune occurring on a phrase-final stressed syllable can be seen at the end of the F0 contour for Example (16):

- (16) L-ikel sar?
'Is lunch ready?'

shown in Figure 4.16 below.

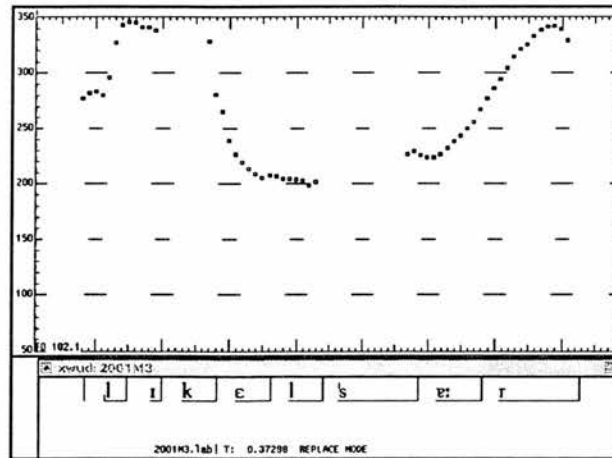


Figure 4.16 L-ikel sar?

A L tone on the stressed syllable of sar is followed by a rising movement to a H tone.

The nuclear question tune in this case can be seen to be compressed onto the only syllable available before the end of that phrase. Assuming a L H sequence of tones, the realisation of the nuclear question tune in this case can be represented as follows:

sar
 σ
 *
 | \
 L H

The monosyllabic nature of the stretch of speech carrying the nuclear tune in Example (16) may result in a relatively unrepresentative realisation of the L H sequence of tones in this case. The realisation of the nuclear question tune in examples having longer nuclear stretches of speech is illustrated below.

An example of the nuclear question tune on a phrase having a stressed penultimate syllable can be seen at the end of the F0 contour for Example (17):

- (17) Il-bastimenti Svediži telqu?
'Have the Swedish ships left?'

shown in Figure 4.17 below.²⁸

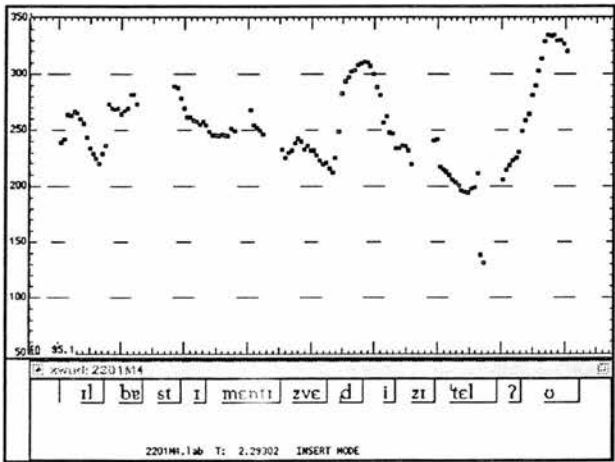
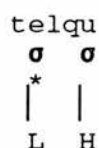


Figure 4.17 Il-bastimenti Svediži telqu?

The nuclear question tune in this case consists of a L tone the lowest point of which is reached relatively late on the stressed syllable of telqu. There is then a rising movement to a H tone on the syllable following the stressed syllable, the highest point of which appears to coincide with the end of the phrase. Assuming, once again, a L H sequence of tones, the nuclear question tune in this case can be represented as

²⁸ The introductory examples of yes-no questions in Section 4.1 earlier in this Chapter also contain instances of the realisation of the nuclear question tune in cases in which stress is penultimate in the phrase. (Cf. also the preliminary interpretation of the aforesaid examples in Subsection 4.1.4.)

follows:



Examples as in the above in which stress is either final or penultimate in the phrase are limiting in that it is impossible on the basis of such examples, to separate out the role of specific tonal material at the different structural positions. In examples in which stress is antepenultimate in the phrase, on the other hand, the post-stressed syllable is structurally separate from the syllable which serves as the location for boundary material. The fact that few words in Maltese have antepenultimate stress means that relatively few examples in my data exhibit stress patterning in which the stressed syllable is further than two syllables from the end of the phrase. The realisation of the nuclear question tune for Example (18):

- (18) Tħobb il-mużika klassika?
 'Do you/does she like classical [as opposed to some other kind of] music?'

illustrated in Figure 4.18 is however typical of other such examples in my data, both those obtained as read text in controlled circumstances and those taken from more spontaneous Map Task data in which stress is antepenultimate in the phrase.

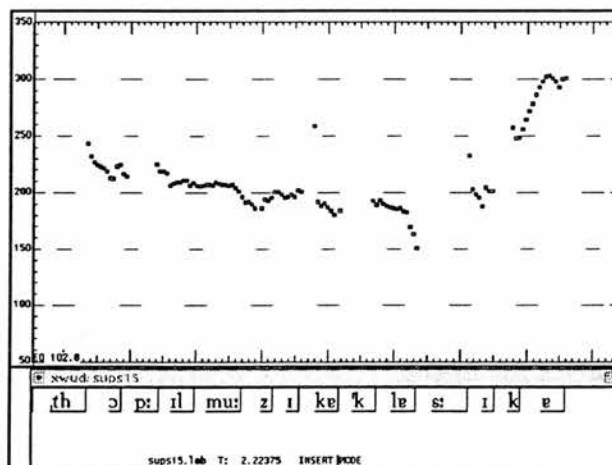
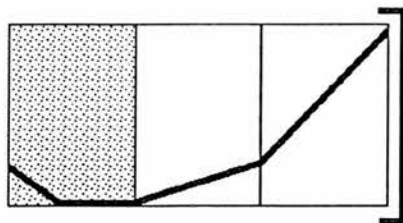


Figure 4.18 Thobb il-mużika klassika?

The L tone in the nuclear tune sequence in this and other examples having stress antepenultimately in the phrase, is reached late on the stressed syllable of klassika and is followed immediately by a rising movement the highest point of which is reached at the end of the phrase. Pitch in the region between the lowest point in the F0 contour and the highest point in the contour is realised as a steadily rising movement. The shape of the nuclear question tune in examples having stress antepenultimately in the phrase can be schematised as in A below. The shaded area in this and other such schematisations represents the stressed syllable of the stretch of speech in question, the presence of a phrase boundary or boundaries being indicated by means of a single bracket.

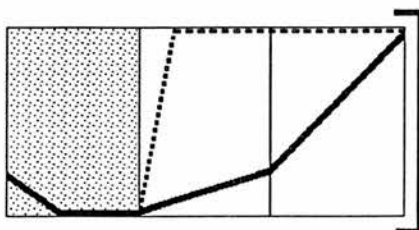


- A -

A number of possibilities over and above those suggested by examples having stress finally and penultimately in the phrase present themselves on consideration of the facts noted above concerning the realisation of the nuclear question tune in examples having stress antepenultimately in the phrase. The first of these is suggested by the fact that pitch rises immediately following the L tone on the stressed syllable. In view of this fact it is possible to suggest an interpretation of this tune as consisting of a L starred tone followed by a H unstarred tone, in other words a bitonal pitch accent L^*+H (equivalent to Pierrehumbert's L^*+H^-). Assuming that no further tonal specification is available at the boundary, such an interpretation would imply that the target for the H tone is to be found on the syllable immediately following the stressed syllable. A possible representation for the association of text and tune of the nuclear question tune in Example (18) can be suggested as follows:

| | | |
|----------|---|---|
| klassika | | |
| σ | σ | σ |
| * | | |
| | | |
| L | H | |

Analysis of the nuclear question tune as consisting solely of a bitonal pitch accent L*+H is however problematic since it fails to take into account the observation that although the rise in pitch from the L starred tone starts immediately after the stressed syllable, the highest point in the F0 contour occurs not on the syllable immediately following the stressed syllable but rather at the end of the phrase. The divergence in shape of a possible realisation based on this interpretation from the actual realisation of the tune is that shown in **B** below and is indicated by the dashed line overlaying a schematisation as in **A**.



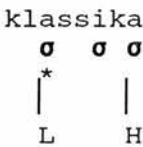
- B -

A second possible interpretation of this tune is one involving a L H H sequence of tones in which a bitonal pitch accent L*+H is followed by a tonal specification for H at the boundary. A possible representation of the text-tune association for the nuclear question tune in Example (18) in this case is given below:

| | | |
|----------|---|---|
| klassika | | |
| σ | σ | σ |
| | | |
| * | | |
| L | H | H |

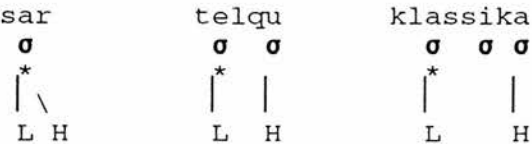
It could be argued that the analysis suggested above captures both the fact that pitch rises immediately following the L tone and the fact that the rise in pitch continues to the end of the phrase. The fact that the rise in pitch to a H is not fully completed on the syllable following the stressed syllable suggests that once again, analysis of this tune in terms of a tonal specification of H on the syllable immediately following the stressed syllable is unsuitable.

An analysis which captures the general shape of the tune in question is one in terms of a L H sequence of tones involving targets for specified L and H tones located at the stressed syllable and at the boundary respectively, thus:



The nuclear question tune can therefore be interpreted as consisting of a L H sequence of tones analysed as L* H%.

Revised representations for the text-tune association of the nuclear question tune in Examples (16), (17) and (18) can now be proposed as follows:



Let us now consider the nuclear question tunes for the reverse constituent order versions of Examples (19), (20) and (21), F0 contours for which are shown in Figures 19, 20 and 21 respectively.

A nuclear question tune can be observed early in the F0 contour for Example (19):

- (19) Sar l-ikel?
'Is lunch ready?'

shown in Figure 4.19 below.

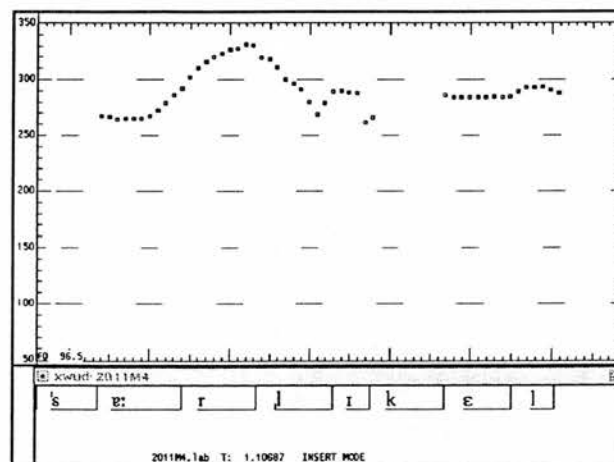


Figure 4.19 Sar l-ikel?

This consists of a L tone on the stressed syllable of sar rising to a H tone at the end of sar. As in the case of Example (16), the fact that the tonal material for the nuclear question tune is compressed onto the monosyllabic sar results in a rather unrepresentative realisation of the nuclear question tune in this case.

The F0 contour for Example (20):

- (20) Telqu l-bastimenti Svediži?
'Have the Swedish ships left?'

shown in Figure 4.20 below also has an early nuclear question tune.

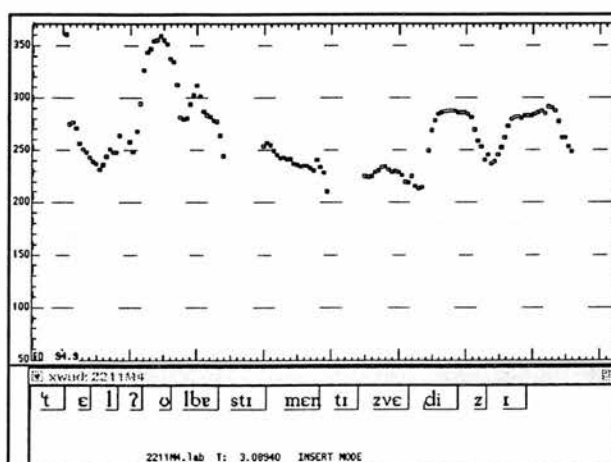


Figure 4.20 Telqu l-bastimenti Svediži?

In this case there is a L tone the lowest point of which is reached late on the stressed syllable of telqu, followed by a rise to a H tone reached at the end of telqu.

Lastly, a nuclear question tune is present on il-mužika klassika in the F0 contour for Example (21):

- (21) Il-mužika klassika tħobb?
'Do you/does she like classical music?'

shown in Figure 4.21.

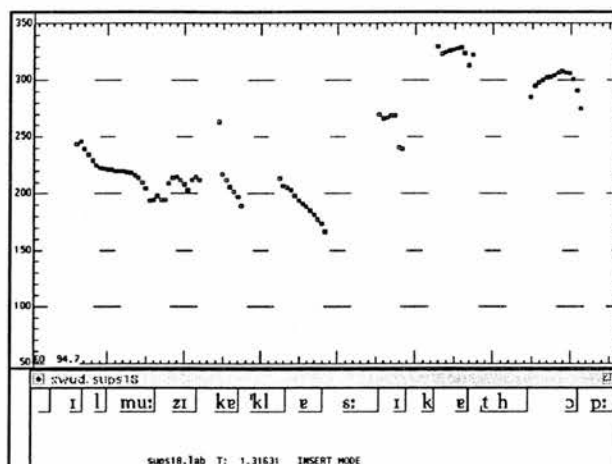


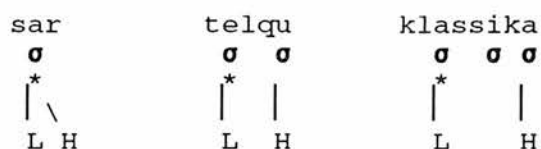
Figure 4.21 Il-mużika klassika tħobb?

This consists of a L tone reached late on the stressed syllable of klassika, rising to a H tone at the end of klassika.

An important point to note is that, in all three examples above, a change in the direction of F0 can be observed at the ends of sar, telqu and klassika respectively, at which point, according to the prosodic representations for these examples given in 4.1.5, a P-phrase boundary is present.

The F0 contours for the nuclear question tunes in the above examples bear a close resemblance to those in their reverse constituent order counterparts. In all cases, a L tone, the target for which is reached late in the stressed syllable of the nuclear portion, is followed immediately by a rise in F0. This rise continues to the phrase boundary at the ends of sar, telqu and klassika respectively.

For reasons similar to those given for the analysis of the nuclear question tune earlier in this section, the nuclear question tune in these examples will also be analysed as consisting of a L H sequence of tones. Identical text-tune representations as for Examples (16), (17) and (18) are proposed below for the alignment of the L H sequence of the nuclear question tune in the above examples with the segmental string, thus:



The L H tonal sequence can once again be analysed as L* H%.

Thus, the nuclear question, both when it occurs late in the I-phrase and when it occurs early in the I-phrase, consists of a L* pitch accent attached to the DTE and a boundary tone, H%, anchored in each case at the edge of the P-phrase. The main difference between the two sets of structures is that while the nuclear stretch of speech in Examples (16), (17) and (18) is bounded by both a P-phrase and an I-phrase boundary, the nuclear stretch of speech in Examples (19), (20) and (21) is bounded on the right by only a P-phrase boundary. Text-tune representations in which H% is reinterpreted in terms of its boundary associations are presented below for the nuclear question tune in Examples (16-18) and (19-21):

$$(16) \quad [\dots [\underset{\substack{| \\ L^*}}{\text{sar}}]_P]_I$$

$$(17) \quad [\dots [\underset{\substack{| \\ L^*}}{\text{telqu}}]_P]_I$$

$$(18) \quad [[\dots \underset{\substack{| \\ L^*}}{\text{il-mużika}} \underset{\substack{| \\ H_P H_I}}{\text{klassika}}]_P]_I$$

$$(19) \quad [[\underset{\substack{| \\ L}}{\text{Sar}}]_P \dots]_I$$

$$(20) \quad [[\underset{\substack{| \\ L^*}}{\text{Telqu}}]_P \dots]_I$$

$$(21) \quad [[\text{Il-mużika} \underset{\substack{| \\ L^*}}{\text{klassika}}]_P \dots]_I$$

The above suggests that in cases when the final P-phrase occurs late in the I-phrase, in other words, if we recall the discussion in Subsection 2.1.3, in instances in which the whole sentence is [+focus], the nuclear question tune may be represented as $L^* H_P H_I$. In cases of the nuclear question tune in a P-phrase occurring early in the I-phrase, in other words when constituent order changes result in a [+focus] stretch of speech early in the sentence, the tune can be represented as $L^* H_P$. In other words, although there is no I-phrase boundary at the rightmost edge of the focussed material in Examples (19-21), a P-phrase boundary is present at the boundary in all cases. These observations provide evidence for the suggestion made earlier in this Chapter (cf. Subsection 4.1.5) that the domain of focus in Maltese is the P-phrase.

Before concluding on this issue let us look more closely at the phonetics of the structures involved. Average values in Hz for the L tone in L^* and for $H\%$, as well as for the respective pitch ranges of the question tune sequences for the data involving Speaker 1 in Vella (1988), are given in Table 4.1 below. The values for $L^* H_P$ in the table are therefore those for the nuclear question tune when it occurs early in the I-phrase while those for $L^* H_P H_I$ are the ones for the tune when it occurs late in the I-phrase.

| Average in Hz | | | |
|------------------------------------------|-----|-----|-------|
| F0 for target | L | H | Range |
| L* H _p n=15 | 243 | 328 | 84 |
| L* H _p H _i n=19 | 202 | 324 | 121 |

TABLE 4.1

Two main points emerge from the above. Firstly, the realisation of L* H% when it occurs early in the I-phrase (L* H_p) is similar to its realisation when it occurs I-phrase finally (L* H_p H_i), except that the pitch range for the realisation of the tonal sequence appears to be narrower in the former case as compared to the latter.

Secondly, there is no significant difference between the value for the height of the H boundary tone when it occurs at a P-phrase alone (i.e. in instances of narrow focus) as compared to when it occurs at both a P-phrase boundary and an I-phrase boundary, the narrowed pitch range in the former case being rather a function of a higher value for L* when it occurs I-phrase initially as compared to I-phrase finally. Following others, amongst whom Hayes and Lahiri (1991), Grice (1992), I suggest that it is possible for structural positions to be left empty and analyse the question tune as L* H_p since it is H_p which is common to both possible configurations. Text-tune representations of the nuclear question tune in Examples (16-18) and (19-21) in keeping with this analysis are therefore presented again below:

(16) [...[sar]_P]_I
 L* H_P

(19) [[Sar]_P...]_I
 L* H_P

(17) [...[telqu]_P]_I
 L* H_P

(20) [[Telqu]_P...]_I
 L* H_P

(18) [...il-mużika klassika]_P]_I
 L* H_P

(21) [[Il-mużika klassika]_P...]_I
 L* H_P

To conclude therefore, the nuclear question tune in Maltese can be characterised as L* H% and reinterpreted as L* H_P. The P-phrase within which the tune occurs is always final within any particular I-phrase, any post-nuclear material being relegated to a relationship of extrametricality to that final P-phrase.

4.2.2 Statement tune

I begin this section by examining the realisation of the nuclear statement tune in Maltese. This consists of a fall from H to L. As indicated in Subsection 4.1.4, a H tone can be seen to be associated, in all cases, with the stressed syllable. Thus, while a possible analysis of this tune as H* L can be suggested, it is once again the case that a closer look needs to be taken at the alignment of this tune with the segmental string before a conclusion is reached as to the status of L.

The nuclear statement tune in cases in which stress occurs finally in the phrase is illustrated at the end of the F0 contour for Example (22):

- (22) L-ikel sar.
'Lunch is ready.'

shown in Figure 4.22 below:

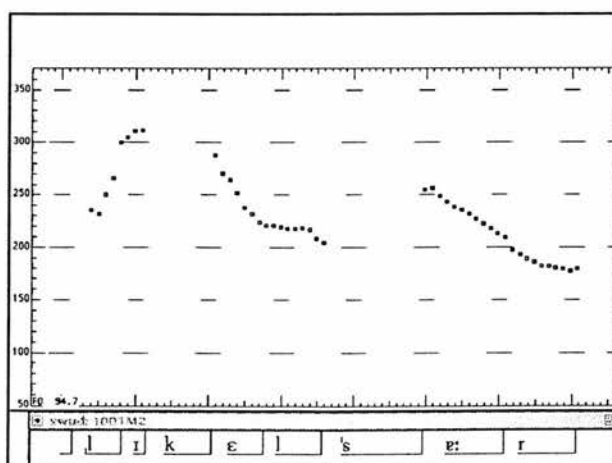
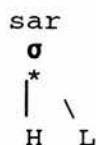


Figure 4.22 L-ikel sar.

A H tone on the stressed syllable of sar is followed by a lowering in F0 to the end of sar. A possible representation for the realisation of the nuclear statement tune when stress is final in the phrase is one consisting of a H L sequence of tones compressed onto the only syllable available before the end of the phrase as follows:



An example of the realisation of the nuclear statement tune in cases in which stress falls penultimately in the phrase can be seen at the end of the F0 contour for Example (23):

- (23) Il-bastimenti Svediži telqu.
'The Swedish ships have left.'

shown in Figure 4.23 below²⁹.

²⁹ Once again, as in the case of the nuclear question tune, the introductory examples of statements in Section 4.1 contain instances of the realisation of the nuclear statement tune in cases in which stress is penultimate in the phrase. (Cf. also preliminary interpretation of these examples in Subsection 4.1.4.)

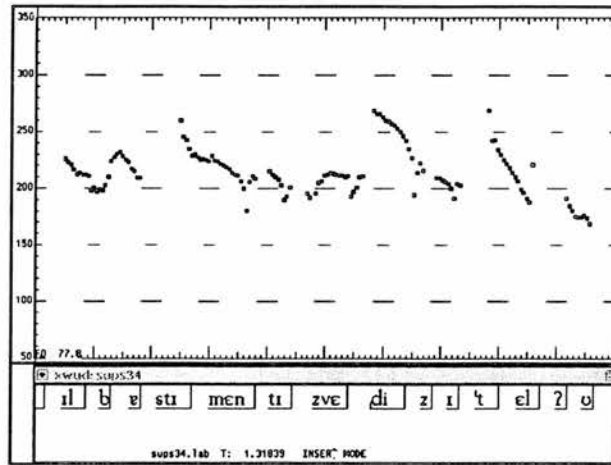
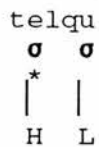


Figure 4.23 Il-bastimenti Svediži telqu.

A fall from the H tone on the stressed syllable of telqu to a L at the end of the phrase can be noted. Assuming, once again, a tune involving a H L sequence of tones, the realisation of the nuclear statement tune in such examples can therefore be represented as follows:



As in the example discussed earlier (cf. Subsection 4.2.1) of the nuclear question tune having stress antepenultimately in the phrase, the specific behaviour of the tonal material composing a tune can be more reliably examined in examples in which the post-stressed syllable is separate from the syllable serving as the location for boundary material. The nuclear statement tune in a phrase having an antepenultimate stressed syllable can be seen at the end of the F0 contour for Example (24):

- (24) Thobb il-mużika klassika.
You/she like/s classical music.

shown in Figure 4.24.

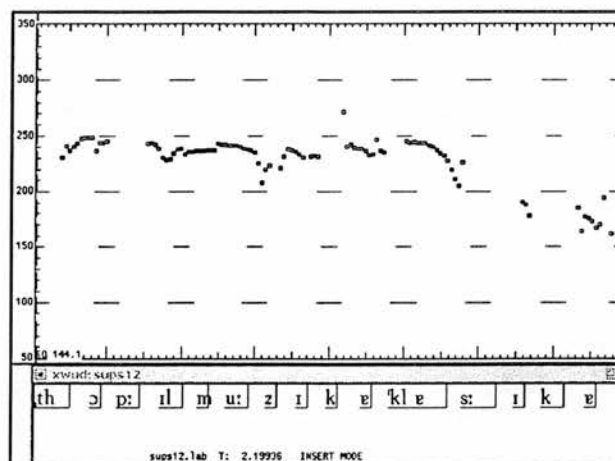
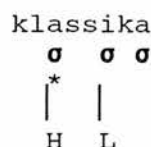


Figure 4.24 Thobb il-mużika klassika.

The fact that, the drop from the H peak on the stressed syllable of klassika in il-mużika klassika in this example occurs immediately following the stressed syllable suggests the following representation for the realisation of the nuclear statement tune in this case rather than one in which the L tone is aligned at the phrase boundary:



It can be noted, however, that rather than levelling out following the drop in pitch to the L tone on the post-stressed syllable, the fall is continuous to the end of the phrase.

This suggests that a modified version of the above representation is necessary, one that will take into account both the immediate drop in pitch following the H tone and the continued fall to the end of the phrase. I therefore propose that the correct analysis of the nuclear statement tune is one involving an additional L tone, in other words, a H L L sequence of tones as compared merely to a H L sequence, thus:



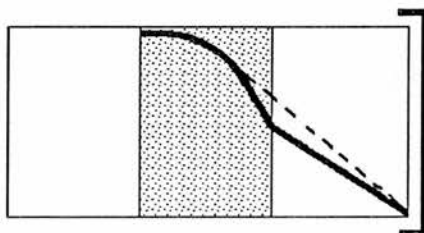
Unlike the nuclear question tune, there is an fall immediately following H*. I therefore propose that the relevant analysis of the nuclear statement tune is one of a tune consisting of a bitonal pitch accent H*+L associated with the stressed syllable and a L boundary tone L% attached to the phrase boundary, thus H*+L L%.

Revised versions of the text-tune association of Examples (22), (23) and (24) are given below:



A fact of note as regards the nuclear statement tune is that, unlike in the case of the nuclear question tune in examples having a nuclear stretch of speech at least two syllables long, the starred tone is aligned early in the stressed syllable. The early

alignment of the starred tone makes it possible for the realisation of the immediately following L trailing tone to occur within the stressed syllable. The effect of this can be noted in the shape of the nuclear statement tune, indicated by the whole line in C, which, rather than having a gradually falling curve as indicated by the dashed line in C, is often characterised by having an obvious point at which a slight change in the general direction of the fall takes place as though in preparation for meeting the specification of the L tone at the boundary.



- C -

In the same way as in the discussion of the question tune, let us now examine the realisation of the nuclear statement tune when it occurs early in the I-phrase rather than when it occurs late in the I-phrase as in the earlier examples. Nuclear statement tunes are as readily identifiable when they occur early in the I-phrase as they are in examples such as Examples (22), (23) and (24) discussed earlier in this section, in which the nuclear tune occurs late in the I-phrase. For example, the F0 contour for (25):

- (25) Sar l-ikel.
'Lunch is ready.'

is shown in Figure 4.25 below.

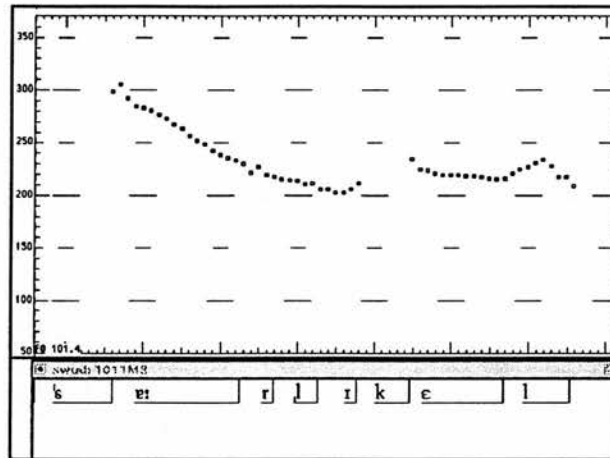


Figure 4.25 Sar l-ikel.

The nuclear statement tune has a H tone on the stressed syllable of sar which is immediately followed by a gradual fall in F0.

The F0 contour for Example (26):

- (26) Telqu l-bastimenti Svediži.
'The Swedish ships have gone.'

is shown in Figure 4.26 below.

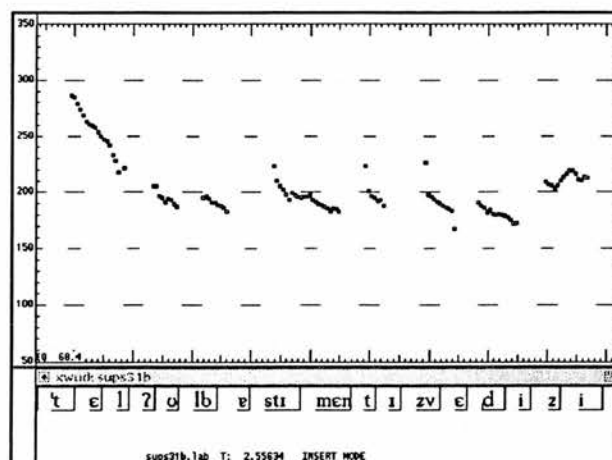


Figure 4.26 Telqu l-bastimenti Svediži.

Once again, an early nuclear statement tune can be observed in this case. This consists of a H tone on the stressed syllable of telqu followed by a fall in pitch.

Lastly, the F0 contour for Example (27):

- (27) Il-mużika klassika tħobb.
'It is classical music that she likes.'

is shown in Figure 4.27 below.

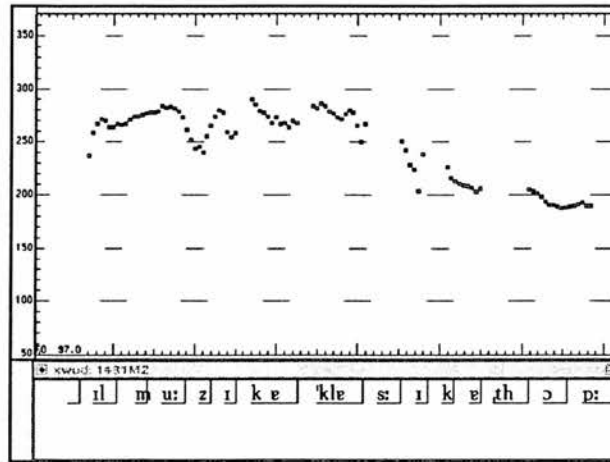


Figure 4.27 Il-mužika klassika thobb.

This has a nuclear statement tune consisting of a H peak on the stressed syllable of klassika in il-mužika klassika and followed by lowering in F0.

Assuming a nuclear statement tune consisting of a H L L sequence of tones for Examples (25), (26) and (27) as for Examples (22), (23) and (24), it will be noted that it is very clearly the DTE of the s node on sar, telqu and klassika in the F0 contours for Examples (25), (26) and (27) respectively that provides the location for the anchoring of the H tone. Moreover, the immediate drop in pitch following the H peak on the stressed syllables of sar, telqu and klassika respectively suggests that, as in the case of the examples having a late nuclear statement tune, a tonal specification of L is necessary following the specification of H, a L tone which it is possible to analyse as a trailing tone in a bitonal pitch accent H*+L.

Pitch in these examples, however, continues to fall to and beyond the phrase boundary at the ends of sar, telqu and klassika suggested by the metrical and prosodic structures for Examples (25-27) given earlier in Subsection 4.1.5. This makes the task of identifying the precise location for the final L tone in the H L L sequence that much harder. In fact, it could be argued that it is not as clear that it is the phrase boundary in this case that provides the location for the anchoring of this final L tone in the sequence. In fact, the lowering in F0 that can be observed following the ends of sar, telqu and klassika continues to the secondarily stressed syllables on l-ikel, Svediži and thobb at which point a change of direction in pitch can be observed, pitch then rising slightly at the I-phrase boundary. A suggestion that follows from this observation is that the final L tone in the H L L sequence is attached to these secondarily stressed syllables rather than to the P-phrase boundary at the ends of sar, telqu and klassika. My claim in this work (cf. 4.3.2) is, in fact, that the valley that can be observed on a secondarily stressed syllable preceding an I-phrase boundary can be characterised as a distinct starred tone. I would however also like to propose that this does not exclude the possibility of the final L tone in the H L L sequence being attached to the P-phrase boundary of the examples being discussed here.

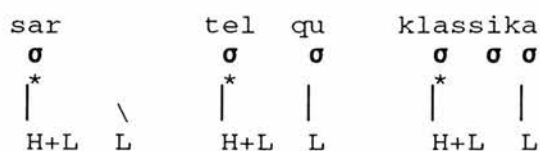
Evidence in favour of the above proposal can be provided by means of a closer examination of the pitch movements characterising structures in which a relatively long segmental stretch separates the DTE of the s node to which the nuclear statement tune is attached from the secondarily stressed syllable found close to the end of the I-phrase boundary. Example (26) is such an example, but other instances of this sort are by no means difficult to find.

Two facts as regards this example are important for our purposes at this stage: firstly that a further lowering in pitch to the end of telqu can be observed following the lowered peak on the stressed syllable of telqu; secondly that pitch movement between the lowest point reached at what is the location for the P-phrase boundary at the end of telqu, and the dip on the stressed syllable of Svediži, is minimal.

The first of these two facts suggests that this tune cannot be accounted for solely in terms of a H L sequence of tones analysed as a bitonal pitch accent H*+L; the second suggests that the significant lowering in pitch that takes place is that before the end of telqu. On the basis of these facts I suggest that in order for the full effect of the lowering in pitch from the peak on the stressed syllable of telqu to the end of telqu to be adequately captured, it is in fact necessary for a L tone to be specified at the P-phrase boundary.

Further evidence, even though of a less weighty nature, for an analysis involving a H L L sequence of tones the final L tone of which sequence is attached at the P-phrase boundary, is related to an impression of completeness that appears to be connected with the falling movement to the end of the nuclear stretch of speech in structures such as those discussed above. The intuition relating to the completeness of the falling movement would be none the less apparent were the post-nuclear stretch to be excised from its original context.

It follows from the above that the text-tune representations for Examples (25), (26) and (27) are identical in form to those for Examples (22), (23) and (24), thus:



It can be concluded that, like the nuclear statement tune when it occurs late in the I-phrase, the nuclear statement tune when it occurs early in the I-phrase consists of a H L L sequence of tones. I analyse the tune involved as consisting of a bitonal pitch accent H*+L and a boundary tone L%, thus H*+L L%.

As in the case of the nuclear question tune, the boundary tone for the tune being considered here can be reinterpreted in terms of its boundary associations thus resulting in the following text-tune representations for the respective nuclear statement tunes in Examples (22-27):

$$(22) \quad \begin{array}{c} \dots [\text{sar}]_p]_I \\ | \\ H^*+L \quad L_p L_I \end{array}$$

$$(25) \quad \begin{array}{c} [[\text{Sar}]_p \dots]_I \\ | \\ H^*+L \quad L_p \end{array}$$

$$(23) \quad \begin{array}{c} \dots [\text{telqu}]_p]_I \\ | \\ H^*+L \quad L_p L_I \end{array}$$

$$(26) \quad \begin{array}{c} [[\text{Telqu}]_p \dots]_I \\ | \\ H^*+L \quad L_p \end{array}$$

$$(24) \quad \begin{array}{c} [\dots \text{il-mu\ddot{z}ika klassika}]_p]_I \\ | \quad | \\ H^*+L \quad L_p L_I \end{array}$$

$$(27) \quad \begin{array}{c} [[\text{Il-mu\ddot{z}ika klassika}]_p \dots]_I \\ | \quad | \\ H^*+L \quad L_p \end{array}$$

An analysis similar to that made with regard to the nuclear question tune involving representations as $H^*+L \quad L_p \quad L_I$ versus $H^*+L \quad L_p$ for the nuclear statement tune is possible. Once again, a look at the phonetics of relevant structures based on the data involving Speaker 1 in Vella (1988) will be useful.

Average values in Hz for the H tone in H*+L and for L%, and for the respective pitch ranges for the implementation of the nuclear statement tune sequence when it occurs early in the I-phrase as compared to when it occurs I-phrase finally, are given in Table 4.2 below.

| Average in Hz | | | |
|--------------------------------------------|-----|-----|-------|
| F0 for target | H | L | Range |
| H*+L L _p n=16 | 287 | 217 | 79 |
| H*+L L _p L ₁ n=21 | 269 | 190 | 80 |

TABLE 4.2

The values given above indicate that, unlike in the case of the nuclear question tune, the pitch range within which the implementation of the nuclear statement tune takes place when it occurs early in the I-phrase (H*+L L_p) differs from that for the implementation of this tune when it occurs I-phrase finally (H*+L L_p L₁) in terms of register rather than of width. In other words, the nuclear statement tune when it occurs I-phrase finally rather than initially is implemented within a remarkably similar but lowered pitch range. While the lowered pitch range is readily explained in terms of the widely attested phenomenon of declination, the remarkable similarity in phonetic implementation suggests that a position suggesting different representations H*+L L_p and H*+L L_p L₁ for the nuclear statement tune would be difficult to justify. As in the case of the nuclear question tune, I therefore propose to analyse the nuclear statement tune as H*+L L_p. Revised text tune representations for the nuclear

statement tunes in Examples (22-27) are shown below:

(22) [...[sar]_p]_I
 H*+L L_p

(25) [[Sar]_p...]_I
 H*+L L_p

(23) [...[telqu]_p]_I
 H*+L L_p

(26) [[Telqu]_p...]_I
 H*+L L_p

(24) [...il-mużika klassika]_p]_I
 H*+L L_p

(27) [Il-mużika klassika]_p]_I
 H*+L L_p

In conclusion therefore, the nuclear statement tune in Maltese is here analysed as H*+L L% and reinterpreted as H*+L L_p.

Before concluding this section, I would like to carry out a brief examination of prenuclear tunes. The reason for discussing prenuclear tunes in this section stems from the fact that the data examined to date has only suggested one form of prenuclear tune in Maltese, this being similar to the statement tune in that it is realised either as a peak or as a fall. Moreover, as regards tunes in prenuclear position, although there is a difference in the phonetic implementation of such tunes depending on whether it is a nuclear question, or a nuclear statement, tune that they precede, there is no phonological difference between prenuclear tunes depending on their context.

It has already been noted (cf. Subsection 4.1.3) that the phonetic implementation of prenuclear tunes, either as merely a peak on the prenuclear syllable, or as a fall from that syllable, is determined by whether such a tune belongs to the same P-phrase as does the nuclear tune, or whether it forms part of a separate P-phrase. Thus, while the prenuclear tune in Example (24) (and for that matter in Example (18) in the preceding

section) consists merely of a peak on the stressed syllable of thobb, Examples (22) and (23) (as well as Examples (16) and (17) in the preceding section) are characterised by a prenuclear tune very similar in shape to the nuclear statement tune.³⁰

If the same analysis holds for the prenuclear statement tune as for the nuclear statement tune, one would expect tunes having the configuration H^*+L for Example (24) (and (18)) and, a configuration $H^*+L L_p$ for Examples (22) and (23) (and (16) and (17)), in other words, tunes whose realisation differs only in terms of whether or not a boundary, and hence a boundary tone, is present. In actual fact however, it does not seem that a fall is present at all in cases where no boundary tone is present. This suggests that in those cases in which the prenuclear statement tune falls, the fall is a function of the L boundary tone rather than of a L tone in a bitonal entity H^*+L . This suggests that there is perhaps a categorical distinction between nuclear and prenuclear tunes in that the nuclear statement tune is actually a bitonal pitch accent while the prenuclear tune is merely realised as high F_0 peak. Analysis of pre-nuclear tunes in Maltese is a subject for future work.

³⁰ Figures 4.24, 4.22 and 4.23 can be found on pages 174, 171 and 173 respectively, while Figures 4.18, 4.16, and 4.17, can be found on pages 160, 157 and 158.

Two post-nuclear dependent tonal movements have been noted to occur systematically in the Maltese data in this analysis. These are a post-nuclear question tune which occurs within the same I-phrase as, but extrametricaly to, a P-phrase ending in a nuclear question tune, and a post-nuclear statement tune which occurs under the same conditions as does the post-nuclear question tune but following a nuclear statement tune instead. The claim discussed in this section is that these post-nuclear tunes are accent-related in the same way as are the nuclear and pre-nuclear tunes and that they therefore cannot be dismissed as phrase final phenomena of some kind. A description of the two post-nuclear tunes follows, particular attention being paid to the alignment of these two tonal movements with the segmental stream.

4.3.1

Post-nuclear question tune

Some examples of the post-nuclear question tune in Maltese can be observed in the F0 contours for Examples (19), (20) and (21) used in Subsection 4.2.1 to illustrate the nuclear question tune when it occurs early in the I-phrase. For ease of reference, figures containing examples relevant to the ongoing discussion for which F0 contours were presented earlier will be newly numbered and reproduced below.

Of the examples containing a post-nuclear stretch of speech presented in Subsection 4.2.1, let us first examine the F0 contour for Example (21), repeated below as Example (28) and shown in Figure 4.28:

- (28) Il-mużika klassika tħobb?
'Do you/does she like classical music?'

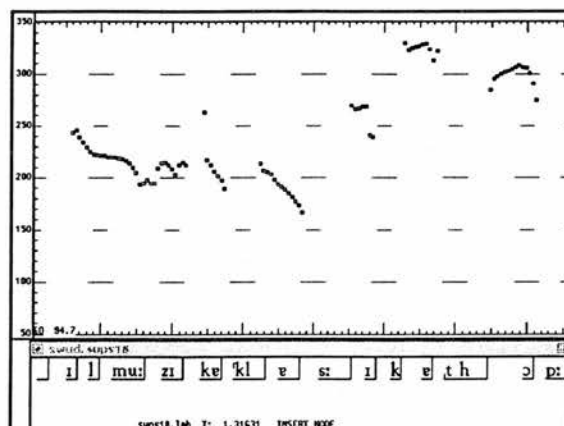


Figure 4.28 Il-mużika klassika tħobb?

The post-nuclear tune in the above example can be characterised as having a level F0 on tħobb, a movement slightly lowered in pitch from the H tone at the P-phrase boundary at the end of klassika. In spite of the fact that it is on tħobb that the secondarily stressed syllable for this sentence falls (cf. metrical and prosodic structures in Subsection 4.1.5), there is nothing to suggest that the lowering following the H tone at the P-phrase boundary is the result of anything other than the effect of a boundary tone. Let us however look at the post-nuclear tune in the F0 contour for Example (19), repeated below as Example (29) and shown in Figure 4.29.

- (29) Sar l-ikel?
'Is lunch ready?'

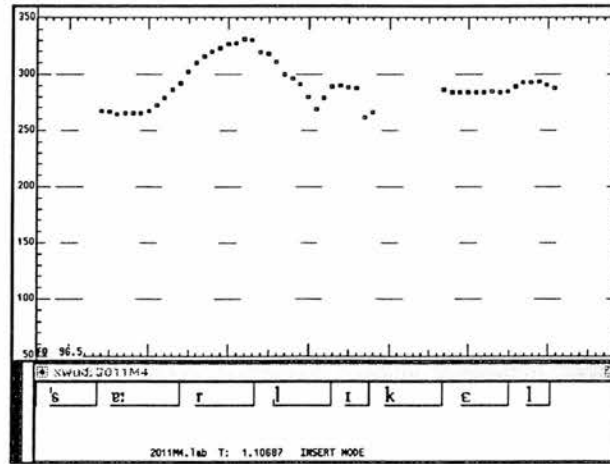


Figure 4.29 Sar l-ikel?

The post-nuclear tune in this example is similar to that in Figure 4.28 in that it consists of a movement which is slightly lowered from the H tone reached at the P-phrase boundary at the end of sar and sustained at a level pitch with no further significant change in pitch at the end of the phrase. The fact that the stressed syllable on l-ikel in the above example occurs penultimately in the phrase rather than finally implies, however, that the lowest point in this particular post-nuclear stretch of speech does not occur at the phrase boundary. An interpretation of the post-nuclear lowering in pitch as resulting from a tailing off of pitch movement at the phrase boundary is therefore harder to justify in this case than in the previous example.

Further evidence against an interpretation of the post-nuclear question tune in terms of a tailing off of pitch movement at the end of the phrase is available on the basis of examples having a stressed syllable antepenultimately in the phrase as for example in (30) given below:

- (30) Togħġbok il-mużika?
'Do you like music?

The F0 contour for Example (30) is shown in Figure 4.30 below.

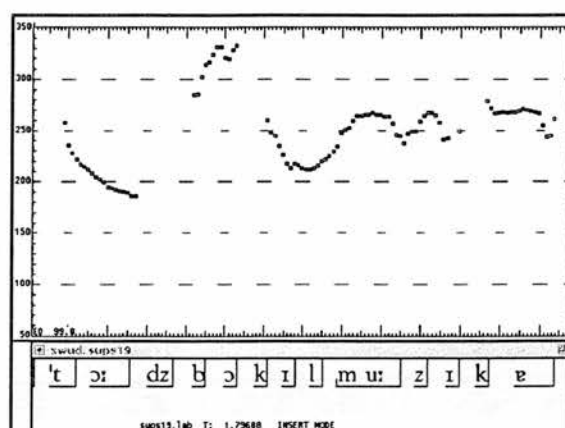


Figure 4.30 Togħġbok il-mużika?

The nuclear rising contour on togħġbok in Example (30) is followed by a fall in pitch to the syllable preceding the secondarily stressed syllable of mużika. There is then a rise in F0, pitch being sustained at a level to the end of the phrase. The level F0 tune on the post-nuclear stretch of speech in this example is similar to the level F0 tunes observed in the earlier examples of the post-nuclear tune. In other words, even though the stressed syllable of the post-nuclear stretch of speech in this case comes antepenultimately in the phrase, it is this stressed syllable that is the starting point of the level tune which occurs. In view of this observation, it is once again difficult to justify an analysis of this tune as resulting from a tailing off of pitch movement at the boundary. In fact, in all the examples having a secondarily stressed syllable which does not coincide with the end of the phrase, pitch is sustained at the same F0 level

from the secondarily stressed syllable to the end of the phrase. This suggests that there is no tonal specification at the end of the phrase.

Another observation which can be made on the basis of the above is that there is a lowering in pitch from this H boundary tone to the intermediate syllable between the end of the phrase boundary following toghgbok and the stressed syllable of mužika, rather than a gradual lowering from the H boundary tone at the end of the nuclear tune to the end of the phrase. Moreover, the fall in pitch from the H boundary tone at the end of toghgbok to the unstressed syllable on il- is followed by a stepping up to a H tone on the stressed syllable of mužika. This suggests that there is a target for tone on the stressed syllable of the post-nuclear question tune. A tonal specification of H can be postulated for the secondarily stressed syllable in the post-nuclear question tune.

The realisation of the post-nuclear tune can be more easily examined in examples having longer post-nuclear stretches than those in the examples illustrated above. Such examples are characterised by a very distinct pattern. An example of the realisation of the post-nuclear tune in an example having a post-nuclear stretch of speech in which the P-phrase boundary is relatively distant from the secondarily stressed syllable close to the I-phrase boundary can be seen in Example 20, repeated as Example 31 and shown as Figure 4.31.

- (31) Telqu l-bastimenti Svediži?
'Have the Swedish ships left?'

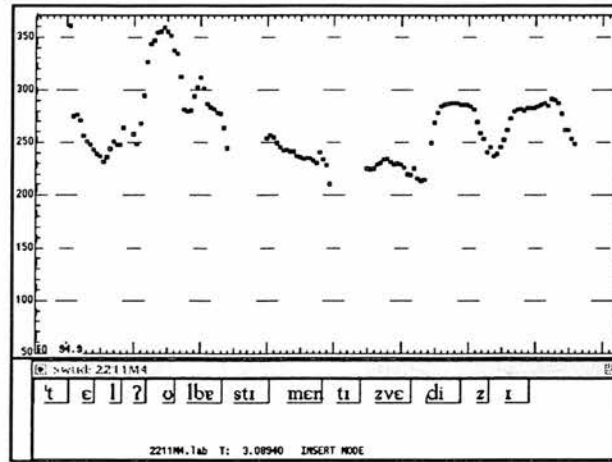
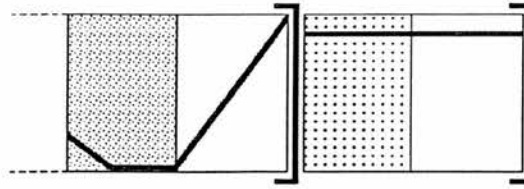


Figure 4.31 Telqu l-bastimenti Svediži?

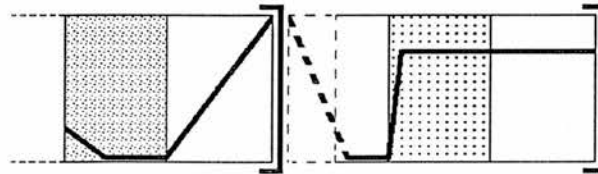
The strongest stress of this long post-nuclear stretch falls on the lexically stressed syllable of Svediži close to the I-phrase boundary. Once again, as in the F0 contours in Figures 4.28, 4.29 and 4.30 there is a relatively high F0 peak on the stressed syllable of Svediži and this is sustained to the end of the phrase. As in the contour for Example (30) above, a low F0 turning point can be observed on the syllable preceding the lexically stressed syllable.

Since the post-nuclear question tune always occurs following a nuclear question tune, the schematisation of the post-nuclear question tune on short post-nuclear stretches in **D** is shown attached to a representation for the nuclear question tune $L^* H_p$. The lighter shaded area represents the stressed syllable of the post-nuclear stretch of speech. Thus:



- D -

The post-nuclear question in longer post-nuclear stretches is schematised in E below. As in the previous schematisation, the post-nuclear question tune is shown attached to a schematisation for the nuclear question tune. Thus:

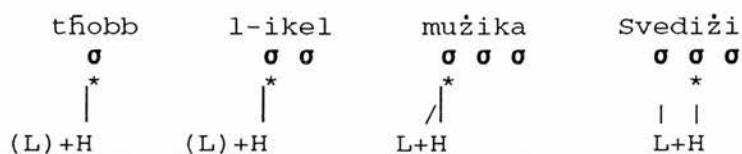


- E -

The main difference between the shorter and the longer post-nuclear question tunes is that the segmental material intervening between the end of the P-phrase boundary and the secondarily stressed syllable in the latter case allows for a L tone to attach to the syllable preceding the secondarily stressed syllable.

The tonal movement involved is here analysed as consisting of a L H sequence of tones. Unlike in the case of the nuclear question tune, however, it is the H tone in this case which is attached to the stressed syllable. The L tone attaches to the

syllable, within the post-nuclear stretch of speech, which precedes the secondarily stressed syllable. An analysis of this tune as consisting of a bitonal pitch accent L+H* can be suggested. In other words, the short post-nuclear stretches in Examples (28) and (29) may have obscured an important fact about the post-nuclear question tune. This is the fact that, like the nuclear question tune, the post-nuclear question tune also consists of a tune involving a L H sequence of tones. It is in its association with the segmental stream that the post-nuclear question tune differs from its nuclear counterpart. In the absence of sufficient segmental material for its association, the L tone in the sequence is deleted. Assuming that the only reason for the absence of a L tone in the earlier examples of this tune is a lack of segmental material, text-tune representations for the association of the post-nuclear question tune with the segmental string in Examples (28-31) can be suggested as follows:



Ladd's (1978:529) analysis of what he refers to as a "stylised" as opposed to a "plain" high-rise" bears a close resemblance in form to the tune being looked at here. A reinterpretation of Ladd's analysis is presented in Pierrehumbert (1980). Pierrehumbert's reanalysis of Ladd's (1978:529) examples is reproduced below as Figure 4.31b:

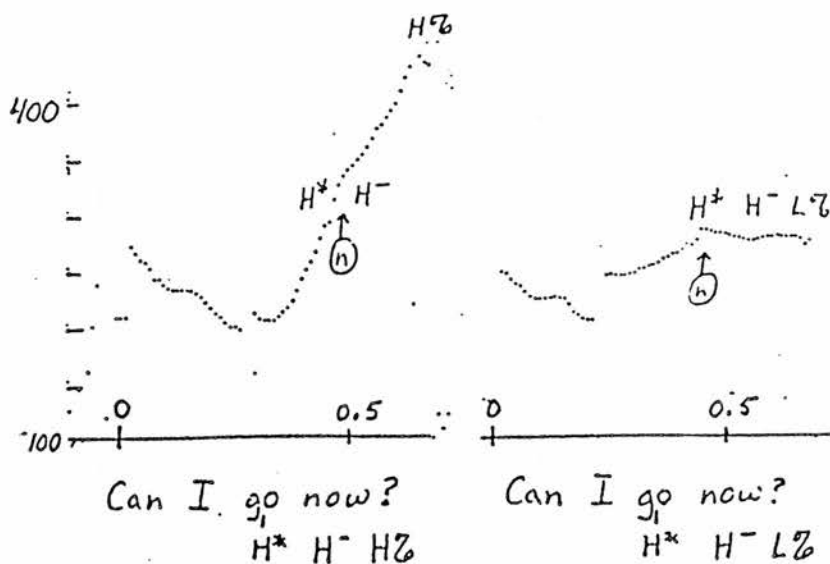


Figure 4.31b (Reproduced from Pierrehumbert 1980:333)

Pierrehumbert proposes to deal with the tune referred to by Ladd as the "stylised high-rise" by means of a rule of upstep. According to this rule, the target corresponding to L is raised after a H phrase accent (H^{*}). Pierrehumbert (1980:141) notes that "because of this rule, the boundary tone after H^{*} is either at the same level as H^{*} (if it is L%), or else higher (if it is H%)". This rule makes it possible to account for the difference between the "plain high-rise" H^{*} H⁻ H% and the "stylised high-rise" H^{*} H⁻ L%.

An analysis of the post-nuclear question tune in Maltese as an upstepping pitch accent in Pierrehumbert (1980) tradition is suggested. To conclude therefore, an accent-related post-nuclear question tune occurs in Maltese. This consists of a L H sequence of tones in a bitonal pitch accent L+H^{*} attached to the metrically strong syllable of a stretch of speech which occurs within the same I-phrase as, but extrametrical to,

a focused P-phrase. The tune cannot occur independently in a separate P-phrase. An example based on the above analysis of the prosodic and tonal structure for Example (31) is presented below:

[[Telqu]_P l-bastimenti Svediži]_I?
 L* H_P L+H*

4.3.2 Post-nuclear statement tune

Let us now examine the post-nuclear statement tune for Example (27) repeated below as Example (32).

- (32) Il-mużika klassika tħobb.
 'She likes classical music.'

The F0 contour for this example is shown again below as Figure 4.32:

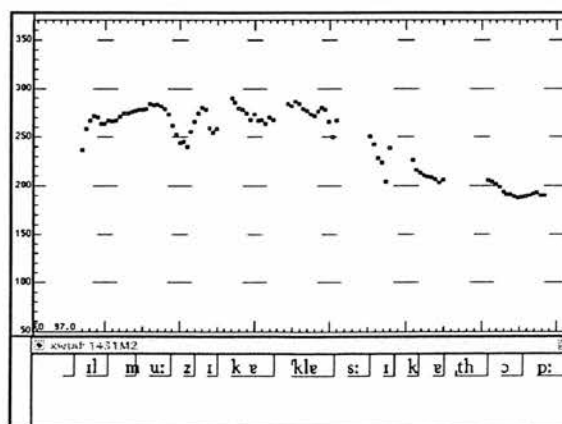


Figure 4.32 Il-mużika klassika tħobb.

The post-nuclear stretch of speech in this case consists of only one syllable. There is a slight continuation of the fall from the final L reached at the end of klassika to a L tone on thobb. As noted earlier with reference to the analysis of the nuclear tunes on sar in Examples (16) and (19) respectively, monosyllabic stretches of speech often exhibit relatively unrepresentative patterns of tonal realisation. The examples which follow therefore illustrate the realisation of the post-nuclear statement tune on longer post-nuclear stretches of speech than the monosyllabic thobb in Example (32).

A clearer example of the post-nuclear statement tune is that for Example (26) repeated here as Example (33):

- (33) Telqu l-bastimenti Svediži.
'The Swedish ships have left.'

The F0 contour for this example is shown in Figure 4.33.

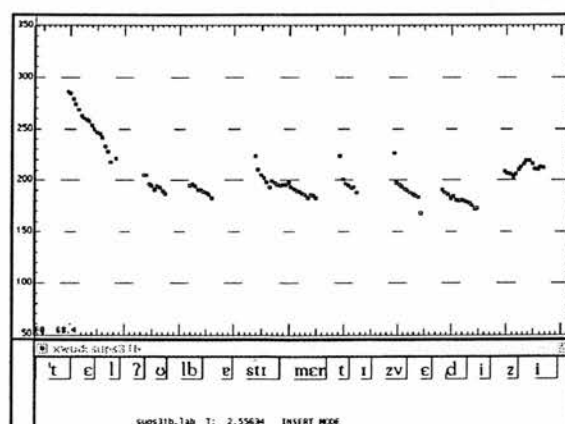


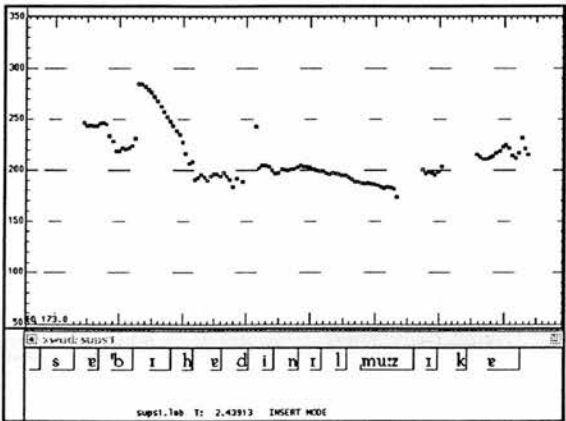
Figure 4.33 Telqu l-bastimenti Svediži.

The nuclear fall to the end of telqu continues in a slightly downward trend with the lowest point being reached on the penultimately stressed syllable of Svediži. A sentence-final slight rise in pitch then occurs.

Another example is that in Example 34:

- (34) Sabiḥa din il-muḏika.
'This music is good.'

The F0 contour for this example is shown in Figure 4.34:

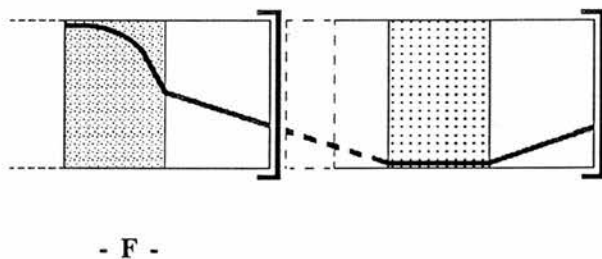


Example 4.34 Sabiḥa din il-muḏika.

The example in this case has a secondarily stressed syllable on the antepenultimate syllable of the post-nuclear stretch of speech. As in the previous cases, there is a continuation of the nuclear fall to the stressed syllable on muḏika. A slight rise in pitch ensues immediately with pitch at the boundary ending somewhere in the middle of the speaker's range.

The examples of the post-nuclear statement tune illustrated above suggest that the crucial point in the analysis of the post-nuclear statement tune is the fact that in cases where a relatively long stretch of speech follows the nuclear statement, pitch movement is slightly falling but minimal until the point where the lexically stressed syllable is reached. The lowest point in the falling contour is always anchored to this lexically stressed syllable. Except for cases in which the lexically stressed syllable is final in the string, a slight sentence final rises then ensues.

Impressionistically, the post-nuclear statement tune can be characterised as a L tone on the secondarily stressed syllable followed by a sentence final rise following a nuclear H^*+L L_p as in F, thus:



I propose to analyse the post-nuclear statement tune as consisting of a L H sequence of tones. The L tone is associated with the secondarily stressed syllable of the post-nuclear stretch of speech while the H tone is associated with the I-phrase boundary. Text-tune representations for the association of the post-nuclear statement tune can be suggested as follows:

| | | |
|----------------|---------------------------|-----------------|
| t h obb | S v ed i zi | mu ž ika |
| σ | σ σ σ | σ σ σ |
| [*] | [*] | [*] |
| L (H) | L H | L H |

The representations given above can be reinterpreted in terms of the specific boundary association of the H tone. Text-tune representations for the respective post-nuclear statement tunes in Examples (32-34) are given below:

$$(32) \quad [[\dots]_P \text{ t} \underset{\text{L}^*(H_I)}{\overset{\text{h}}{\underset{\text{q}}{\underset{\text{b}}{\underset{\text{b}}{\text{b}}}}}}]_I$$

$$(33) \quad [[\dots]_P \text{ il-bastimenti Sved} \underset{\text{L}^*H_I}{\overset{\text{i}}{\underset{\text{z}}{\underset{\text{i}}{\text{i}}}}}]_I$$

$$(34) \quad [[\dots]_P \text{ din il-} \underset{\text{L}^*}{\overset{\text{m}}{\underset{\text{u}}{\underset{\text{z}}{\underset{\text{i}}{\text{k}}{\text{a}}}}}}]_I \underset{H_I}{\overset{\text{a}}{\text{a}}}]_I$$

The above suggests that the post-nuclear statement tune be reinterpreted as $L^* H_I$. Such an analysis successfully differentiates the post-nuclear statement tune from the rising tunes earlier in this chapter (cf. Subsections 4.2.1 and 4.3.1).

To conclude therefore, the post-nuclear statement tune consists of L H sequence of tones. The L tone is attached to the metrically strong syllable of the stretch of speech which occurs within the same I-phrase as, but extrametricaly to, a focussed P-phrase. Like the post-nuclear question tune, the post-nuclear statement tune cannot occur independently in its own P-phrase. By differentiating between tones which associate with P-phrase boundaries and those which associate with I-phrase boundaries, the distinctness of the different rising tunes, in particular that between $L^* H_P$ and $L^* H_I$ is captured. The analysis of this tune as consisting of L^* followed by H_I also accurately captures the observation that the post-nuclear stretch of speech occurs outside the domain of focus which is the P-phrase.

4.4 Other tunes

4.4.1 Vocatives in Maltese

Final vocatives in English have often been observed to be characterised by a lack of nuclear prominence (cf. for example, Bing 1979:37; Couper-Kuhlen 1986:147). According to a related claim, final vocatives in English do not take a separate prosodic domain, regardless of whether or not a preceding pause is present (cf. Halliday 1967:47; Cruttenden 1981:44).

The intonation of vocatives in Maltese can be observed to differ from that of vocatives in English in a number of ways. In order to illustrate, let us begin by examining the contours for the pair of examples in (35) and (36).

(35) In-Nannu Karmenu.
'Grandfather is Karmenu.'

(36) In-Nannu, Karmenu.
'Grandfather, Karmenu.'

An appropriate setting for the use of Example (35) would be a context requiring that Grandfather be identified as the man called Karmenu; Example (36) on the other hand would be used in a context requiring the introduction of Grandfather to a third

person called Karmenu.³¹

The contours for Examples (35) and (36) are shown below in Figures 4.35 and 4.36.

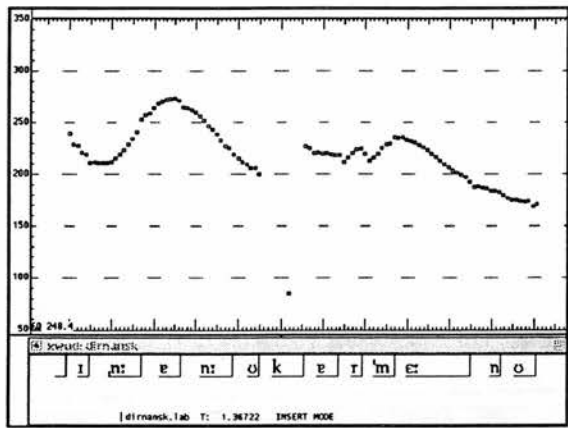


Figure 4.35 In-Nannu Karmenu.

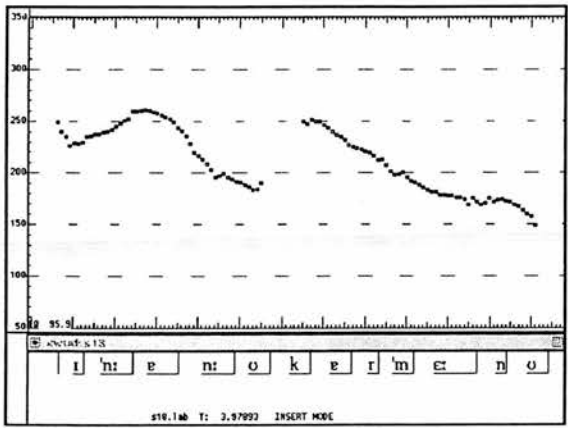


Figure 4.36 In-Nannu, Karmenu.

³¹ Example (35) above represents the interpretation of In-Nannu Karmenu, as an equative predication (cf. Subsection 2.1.2). The alternative interpretation of this sentence corresponding to a shortened version of (Dan (hu)) n-Nannu Karmenu, '(This is) Grandfather Karmenu,' consists of an intonational phrase of one phonological phrase and has an intonational form involving a pre-nuclear H* on in-Nannu and a nuclear H*+L L_p on Karmenu.

The F0 contours for both the above examples consist of two falling movements. The intonational form of the second of the two falling movements in Figure 4.35 differs from that in Figure 4.36. I suggest that the contour on Karmenu in Example (36) is intonationally distinct from that on Karmenu in Example (35).

The use of prosody in English to distinguish between examples parallel to the Maltese examples given in (35) and (36) above is discussed by Bing (1979:31-32). Her examples, with intonational markings as in the original, are reproduced as (i) and (ii) below.

(i) This is my | sis | ter/ Eu\ nice.

(ii) This is my | sis | ter, Eunice/.

Using prosody to distinguish between pairs of examples such as those given above is, however, where the similarity between Maltese and English ends. In terms of the prosodic devices used by Maltese to differentiate between (35) and (36) and by English to distinguish (i) from (ii), the two languages differ considerably, the two principal differences being as follows:

- (a) According to Bing's analysis, the presence or absence of what she calls a "prominence tone" on Eunice is what distinguishes (i) from (ii). This is not the case for the above examples from Maltese, Karmenu being assigned nuclear prominence in both Examples (35) and (36).

(b) According to most analyses of this phenomenon in English, not least Bing's, vocatives are assigned to the same intonational domain as the preceding material even in the presence of a pause. The converse can be observed of the structure in Maltese ending in a vocative. This can be analysed as consisting of two separate intonational domains on two counts. First of all, the definiteness of the F0 peak on the vocative makes it possible to identify a separate pitch accent on the vocative even in the absence of a well defined pause, as, for example, in the contour for (37):

- (37) In-Nanna, Rożina.
'This is Grandmother, Rożina.'

shown in Figure 4.37 below, which has no clear pause between the H*+L L_p pitch accent on In-Nanna and the tonal movement on Rożina.

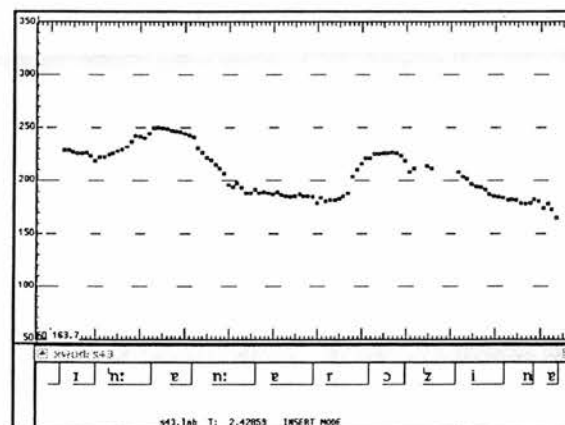


Figure 4.37 In-Nanna, Rożina.

Secondly, further evidence for assigning vocatives to separate intonational domains in Maltese is provided by the existence of the sharp fall in pitch

following the H*+L tone on the stressed syllable of Nannu and on that of Nanna in Examples (36) and (37) respectively. If we recall, the conclusion reached in Section 4.1.3 suggests a form for the nuclear statement tune involving a H*+L pitch accent, phonological phrasing providing the context for the realisation of a L tone, L_p, following H*+L. The falling movements in the first parts of the two examples being considered can be interpreted as realisations of the nuclear tune H*+L L_p. As we saw earlier, nuclear tunes are always phrase final. We can therefore also conclude that the pitch accents on Karmenu and Rožina lie outside the domain of the nuclear tone.

Let us now examine the contour for Example (38):

- (38) Kielet, Joe.
'She has eaten, Joe.'

shown in Figure 4.38.

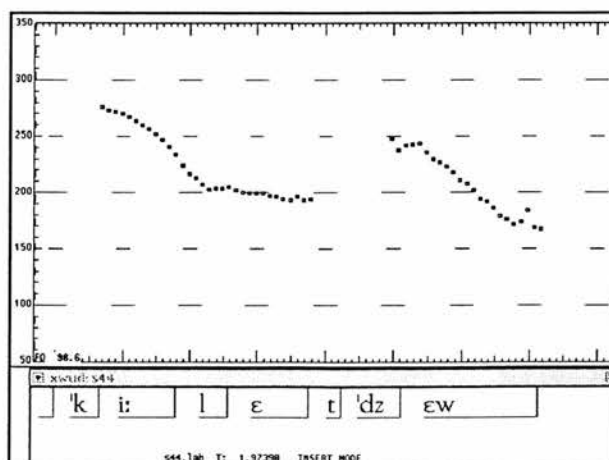


Figure 4.38 Kielet, Joe.

Once again it is clear both from the definite F0 peak on Joe and the presence of the preceding pause, that the vocative Joe is assigned nuclear prominence separate from that on Kielet. The same seems to be the case with regard to the contours on the vocatives in Examples (39) and (40) below shown in Figures 4.39 and 4.40 respectively.

- (39) Kielet, Mario.
'She has eaten, Mario.'
- (40) Kielet, Angela.
'She has eaten, Angela.'

The vocatives in these two Examples are candidates for both nuclear prominence and separate intonational domains.

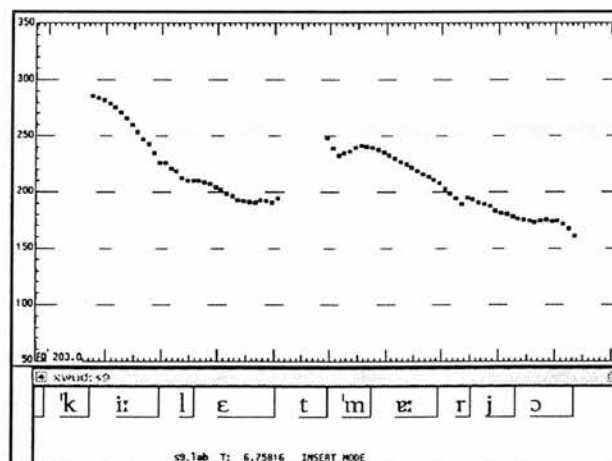


Figure 4.39 Kielet, Mario.

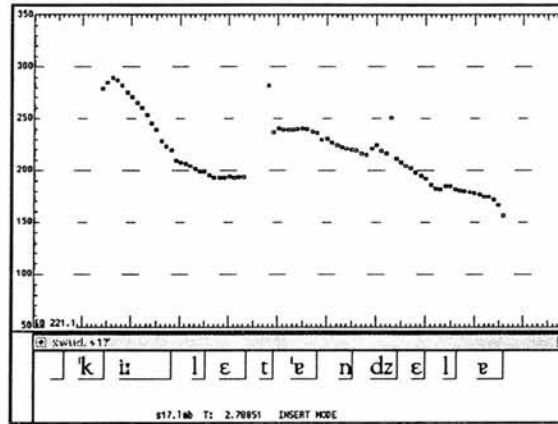


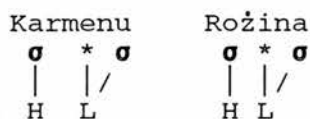
Figure 4.40 Kielet, Angela.

On first inspection, the contours on the vocatives for Examples (38), (39) and (40) appear to consist of the same tune as that on Kielet in the same three examples, in other words, a falling tune consisting of a H*+L pitch accent on the stressed syllables of Joe, Mario and Angela respectively, and a L_p at the end of the phrase. Text-tune representations, omitting any indication as to whether the tones in question are starred or unstarred, are given for the vocatives in the above examples:

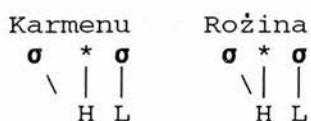
| Joe | Mario | Angela |
|----------|---------|--------------|
| * \ | * σ | * σ σ \ |
| H L | H L | H L |

On the basis of these data there is no reason to suspect that there is any difference between these H L sequences and the basic "statement" tune H*+L L_p described earlier in Subsection 4.2.2. Let us, however look back at the tonal movement on the vocatives Karmenu in Figure 4.36 and Rožina in Figure 4.37. Both Karmenu and Rožina are stressed on their respective penultimate syllables. However, in both cases

it is clear that the F0 peak comes at the beginning of the tonal movement, rather than being linked to the respective stressed syllables as would have been the case had the contours in question been examples of the pitch accent H*+L L_p, thus:



not:



Thus, forgetting for a moment the apparently contradictory evidence of the contours on the vocatives in Examples (38), (39) and (40), it is possible to suggest, on the basis of the contours on the vocatives in Examples (36) and (37) that the falling contour on vocatives in Maltese contrasts with the falling contour introduced earlier as H*+L L_p. Thus, not only does Maltese differ from English in that its vocatives carry "prominence tones" where vocatives in English do not. It is also possible that the tonal movement in question is in fact an entity in its own right, a **vocative contour** as it were, distinct from the other basic entities identified so far.

On the basis of the above examples, one possible generalisation that can be drawn as regards the vocative contour is that the tune involved consists of the tonal sequence H L. In view of the fact that there is a continuation of the fall after the stressed

syllable, a more accurate generalisation is one involving an analysis of the tune as consisting of a tonal sequence H L L. The final L tone in the sequence is not in evidence in examples of vocatives which are stressed on their final syllables, as in Examples (41) and (42) below:

- (41) Kielet, Gužé.
'She has eaten, Gužé.'
- (42) Kielet, Antoinette.
'She has eaten, Antoinette.'

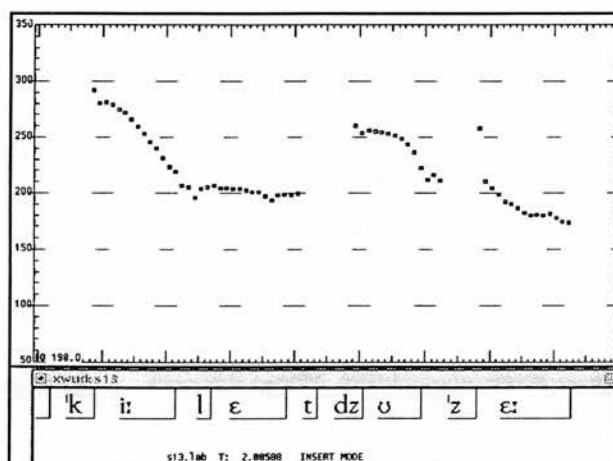


Figure 4.41 Kielet, Gužé.

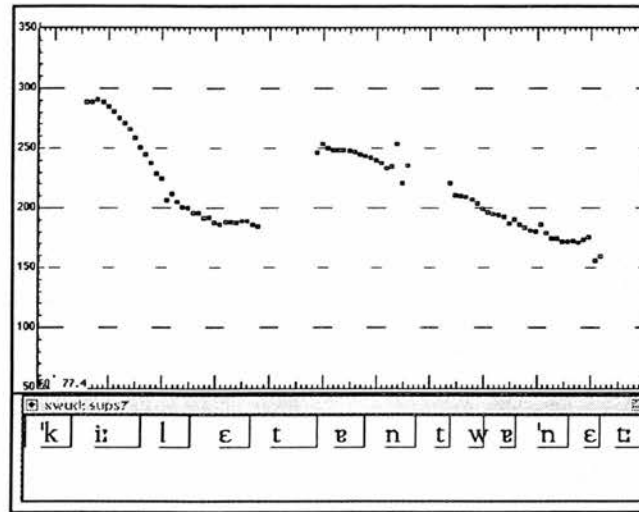
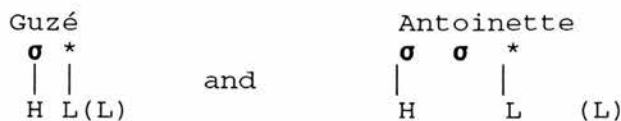


Figure 4.42 Kielet, Antoinette.

Like the penultimately stressed examples involving the vocatives Karmenu and Rožina, the contours for examples (41) and (42) suggest that, unlike in the case of $H^*+L L_p$, it is not the H tone in these cases which is linked to the stressed syllable. Rather, it is possible to suggest a further generalisation, this being that the H tone in the sequence is in fact attached to the first syllable of the phrase, in other words to the phrase boundary. Thus:



In both these cases, as also in Examples (36) and (37) above, it is the L tone which is linked to the stressed syllable rather than the H tone. In the text-tune representation for Antoinette given above I have associated the L tone with the stressed syllable. There is insufficient segmental material for the anchoring of the final L tone in the H

L L sequence postulated. The existence of the drop in F0 which can be observed to take place immediately following the initial H tone on Antoinette suggests that the H tone does not spread its influence to syllables other than that with which it is associated. However, neither is it clear that there is leftward spreading from L* to the preceding syllable which I have not yet specified for tone. Let us examine the contour of a finally stressed vocative structure having two syllables intervening between the boundary and the stressed syllable, for example, ja injorant in (43):

- (43) Kielet, ja injorant.
'She has eaten, you idiot.'

The contour for (43) shown in Figure 4.43 suggests that stepping down from the initial H tone takes place immediately following the realisation of the H tone. I interpret the drop in F0 following the H tone at the boundary as resulting from a leftward spreading of the L tone on the stressed syllable.

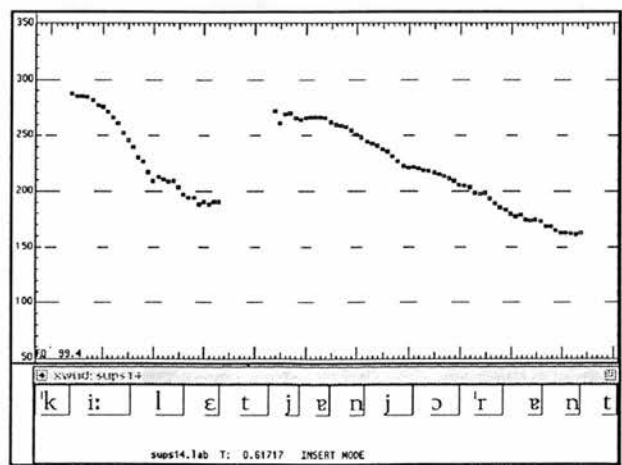
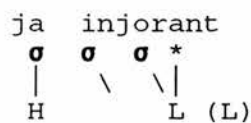


Figure 4.43 Kielet, ja injorant.

Thus:



The same trend of an initial H tone followed by an immediate drop in F0 and a L tone on the stressed syllable of the vocative can be seen in the Example in (44) of a rather old-fashioned form of polite address:

- (44) Kielet, Sinjura Manwela.
'She has eaten, Mrs. Manwela.'

The contour for Example (44) is shown in Figure 4.44.

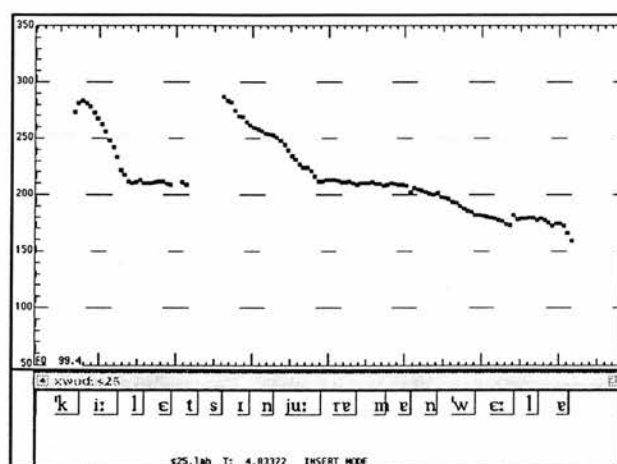


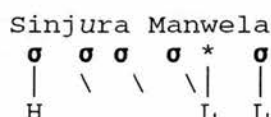
Figure 4.44 Kielet, sinjura Manwela.

This example provides further evidence for the analysis of this contour thus far.

Sinjura Manwela has a strongly stressed second element and a weakly stressed first

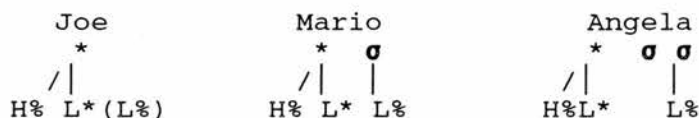
element, stress falling as shown on the penultimate syllable of each element. The fact that there is an immediate drop in pitch following the initial H tone in spite of the relatively greater strength of the stressed syllable of Sinjura as compared to its adjacent syllables supports my claim that the H tone in the H L L sequence is associated with the boundary and doesn't spread beyond the syllable to which it is attached.

Thus:



The fact that the second L in the H L L sequence only appears when enough segmental material is present between the stressed syllable and the boundary suggests that we are in fact dealing with a tune consisting of a boundary tone H% followed by L* and a final boundary L%, thus, H% L* L%. It is evident therefore, that the gestures involved in this tonal movement are an initial H% followed by L*. In cases having enough segmental material for its realisation there is also a further lowering at the boundary, therefore L%. The fact that the H tone does not spread results in the auditory percept of an immediate stepping down movement from the initial H tone. The tonal specification of L* results in a stepping down to the stressed syllable, general lowering continuing to the L% at the end of the phrase.

On the basis of this analysis, is it possible to account for the contours of the vocatives in Examples (38), (39) and (40)? Assuming a tune having a tonal specification H% L* L%, text-tune representations of the vocatives in question are possible, thus:



In other words, in the absence of segmental material preceding the stressed syllable with which the H tone can be associated, the distribution of tonal material is as follows: both H% and the following L* align with the initial syllable while the final L% aligns with the boundary. The L% tone is only realised when more than one syllable follows the stressed syllable. Disambiguation of H% L* L% from the nuclear statement tune H*+L L_p in cases such as these is evidently dealt with at the level of the phonetic implementation of timing and pitch range.

To summarise therefore, the tune described here and being represented as H% L* L% is definitely distinct from H*+L L%.³² Although it is as yet unclear what sorts of structures and/or situations are prerequisite to having this tune, it is likely that it is more than just a "vocative" contour. In the following two sections I will examine the contours on imperatives and tag questions.

³² The distinction between the nuclear statement tune and the vocative contour is captured even without a specific reference to the fact that the L boundary tone in the nuclear statement tune is attached to the P-phrasal boundary. For ease of reference in the remainder of this section I will therefore refer to the nuclear statement tune as H*+L L% rather than as H*+L L_p.

Let us look at a number of imperative structures. Intuitively there appears to be a peremptoriness about the fall on the imperative Kul that is absent from the fall on the declarative Kiel. The tune involved however seems to be a fall, H*+L L%. The contour for Example (45) is shown in Figure 4.45:

- (45) Kul.
'Eat.'

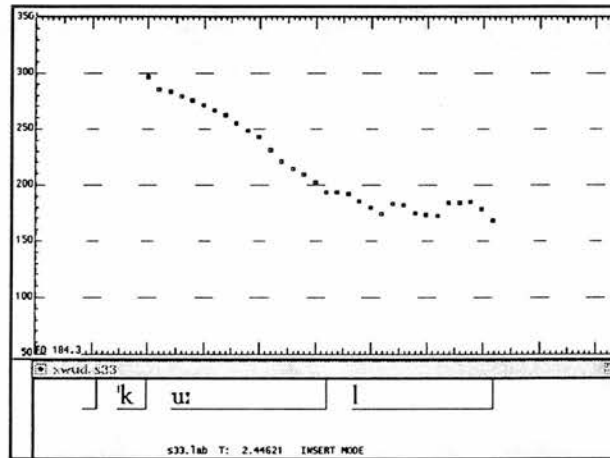


Figure 4.45 Kul.

This can be compared to the F0 contour for Example (46), shown in Figure 4.46 below:

- (46) Kiel.
'He has eaten.'

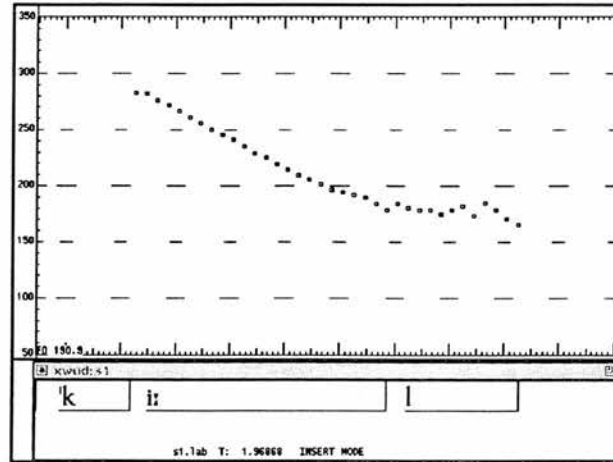


Figure 4.46 Kiel.

Although durational and pitch range effects at the phonetic level probably play a role in the auditory perception of distinctness between the two examples, I have not tested for such differences in this work. Instead, I have attempted to discover a phonological explanation for what actually lies behind the auditorily perceived difference between the intonation of the imperative and declarative structures.

As before, it is unrevealing to consider mono- and disyllabic utterances. A difference appears clearly, however, with trisyllabic utterances such as those in Examples (47) and (48) both of which take stress on their penultimate syllable:

- (47) Kulhielha.
'Eat it [item of food belonging to her].'
- (48) Kilhielha.
'He's eaten hers [item of food].'

The contours for this pair of examples are intonationally distinct. Thus, as can be seen in Figure 4.47 below, the falling movement on Kulhielha, the imperative structure, starts immediately in the first syllable.

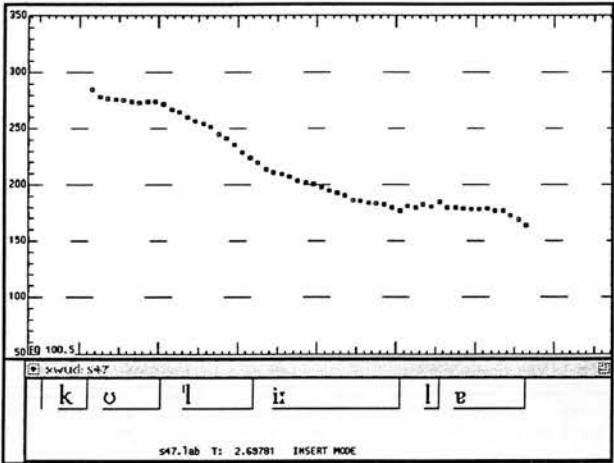


Figure 4.47 Kulhielha.

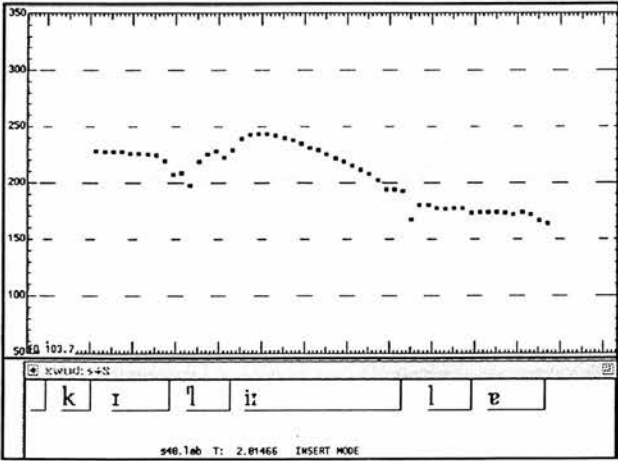
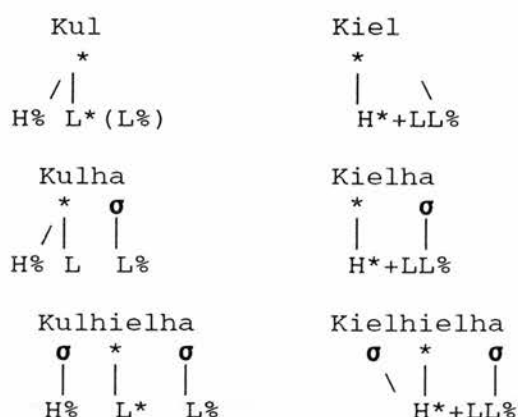


Figure 4.48 Kilhielha.

The high F0 peak on the declarative structure in Figure 4.48, on the other hand, is attached to the stressed syllable. It can therefore be concluded that, as in the case of the vocatives, an intonational contrast between the declarative and its corresponding imperative structure is possible in terms of a distinction between H*+L L% and a falling tonal movement consisting of H%, L* attached to the stressed syllable and a following L%. In the absence of enough segmental material preceding the stressed syllable for the realisation of the H tone, the alignment of the tonal material is, as it were, shifted to the left. Text-tune representations for the imperative as compared to the declarative structures based on the above analysis are given below:



4.4.3 Tag questions

Vella's (1988) preliminary analysis of Maltese tag questions with hux reports a falling H L pitch contour for the tags in her data. In all cases, a H tone is reported to occur on the tag, followed by a fall to L. One of the most significant features of the tags in Vella's data is the relatively high average F0 value for the peaks on the tags as compared to earlier peaks in the sequence. Although average values for the relative

heights of the peaks preceding the tags and the peaks on the tags were different across the different constituent orders, the declination to a lower peak height which one would expect to take place (Ladd and Johnson, 1987) cannot in fact be considered to be significant. In view of the discovery of a H% L* L% tune for vocatives and imperatives however, it now seems possible that the monosyllabic nature of the tags analysed in the above work may be the cause of a veiling of the real facts about tags in Maltese. In what follows I will therefore look at a number of positive tags having longer segmental and syllabic structures. First let us examine the contour for the monosyllabic tag hux in Example (49):

- (49) Kielet, hux?
'She's eaten, isn't that so?'

shown in Figure 4.49 below.

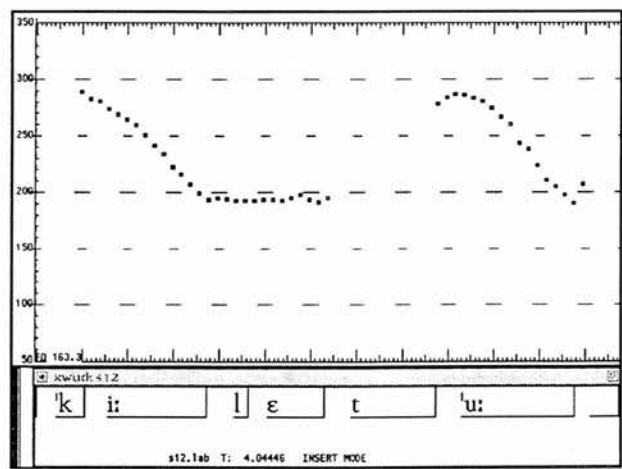


Figure 4.49 Kielet, hux?

The tonal movement on the tag is clearly a falling one consisting of a sequence of tones H L. The contour on hux hekk in Example (50):

- (50) Kielet, hux hekk?
'She's eaten, isn't that so?'

which is stressed on the final element of the tag, thus, hux hekk, is also a falling one. However, as can be seen in Figure 4.50, the falling movement on the tag starts on hux rather than on the tag's stressed syllable.

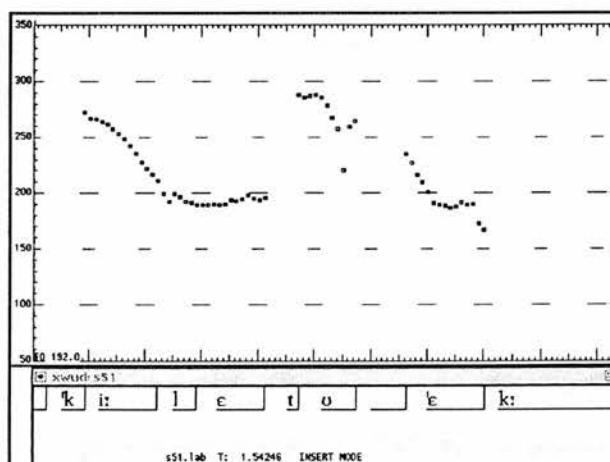


Figure 4.50 Kielet, hux hekk?

Next let us look at the contour on hux tassew in Example (51):

- (51) Kielet, hux tassew?
'She's eaten, isn't that so?'

Hux tassew is stressed on the final syllable of the tag. The contour on the tag consists of a falling movement, but, once again, as can be seen in Figure 4.51 the fall starts early on the tag and not on the stressed syllable as can be seen in Figure 4.51.

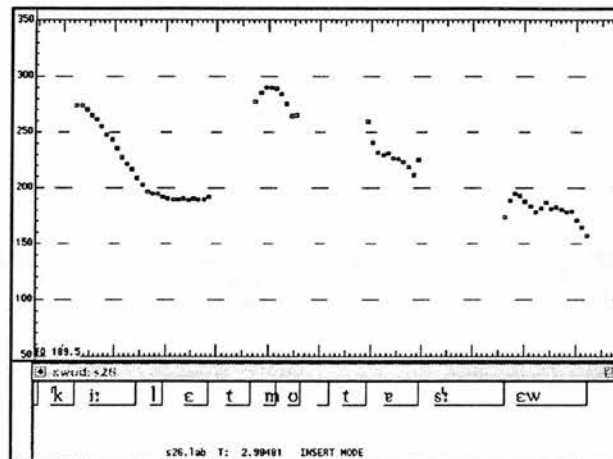


Figure 4.51 Kielet, hux tassew?

Another possible tag is that for Example (52):

- (52) Kielet, hux veru?
'She's eaten, isn't that true?'

As can be seen in Figure 4.52, the tonal movement in question is once again a falling one with the fall starting early on the tag and having a L falling tone on the stressed syllable.

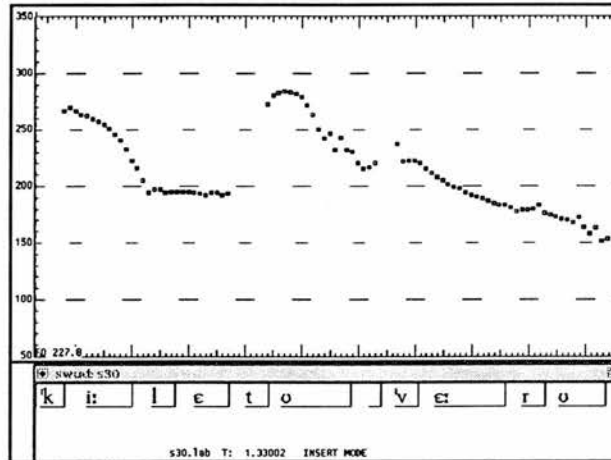
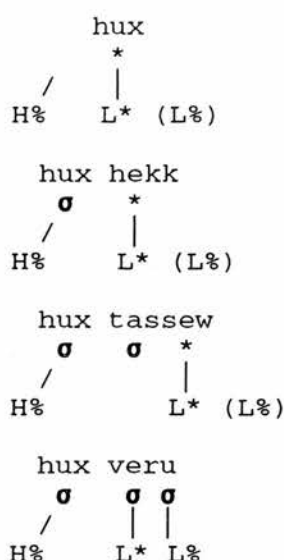


Figure 4.52 Kielet, hux veru?

As in the case of the vocatives and imperatives, a generalisation to the effect that the tonal sequence involved is one consisting of H L L can be drawn. Moreover, it is once more the case that the H tone appears to align with the first available syllable in the phrase, only aligning with the stressed syllable when segmental material for an initial boundary tone is not present. The initial H tone is immediately stepped down and a L tone follows attached to the stressed syllable. There is then a continuing fall to a final L at the boundary. Text-tune representations for the tags are given below:



In view of the fact that all the tunes identified so far seem to pair, $\text{H}^* + \text{L}$ L_p with L^* H_p and $\text{L}^* + \text{H}_i$ with $\text{L} + \text{H}^*$, it is tempting to look for a counterpart for the tune identified here which we are representing as $\text{H\%} \text{L}^* \text{L\%}$. In my earlier work on the intonational form of tags in Maltese the existence of negative as well as positive tags was mentioned but the possibility of a difference in their intonational form was not pursued (Vella 1988: 23). Such a difference does in fact exist. Thus, for example:

- (53) Kielet, mhux hekk?
'She's eaten, hasn't she?'

contrasts with Example (50) in that while the expected answer to (50) is Iva, 'yes', the expected answer in this case is Le, 'no'. Like hux hekk, mhux hekk, is stressed on its second element as shown. As can be seen in Figure 4.53, however, the contour on the tag in this case, has a rising tune.

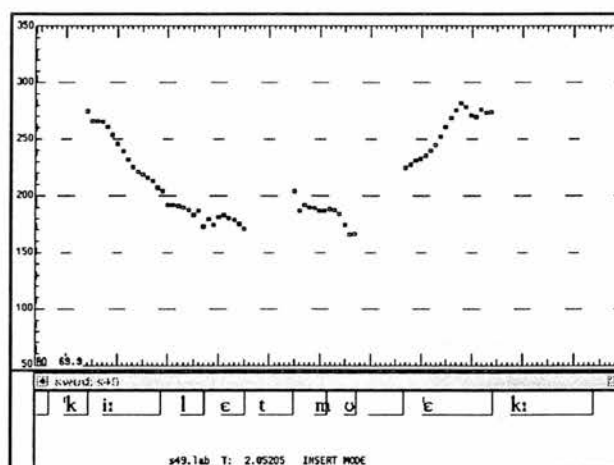


Figure 4.53 Kielet, mhux hekk?

Although similar in shape to a rising $L^* H_p$ tune, the $L H$ tonal sequence on mhux hekk aligns earlier than would have been the case had the pitch accent involved been the rising tune $L^* H_p$. This suggests that we may once again be dealing with a tonal movement which is phonologically distinct. The contour for Example (54):

- (54) Kielet, mhux tassew?
'She's eaten, hasn't she?'

also suggests that it is unlikely that the tune we are dealing with is a $L^* H_p$ tune as, once again, as can be seen in Figure 4.54, the L tone in the $L H$ sequence occurs earlier than on the stressed syllable of mhux tassew as would have been the case had this been an instance of $L^* H_p$.

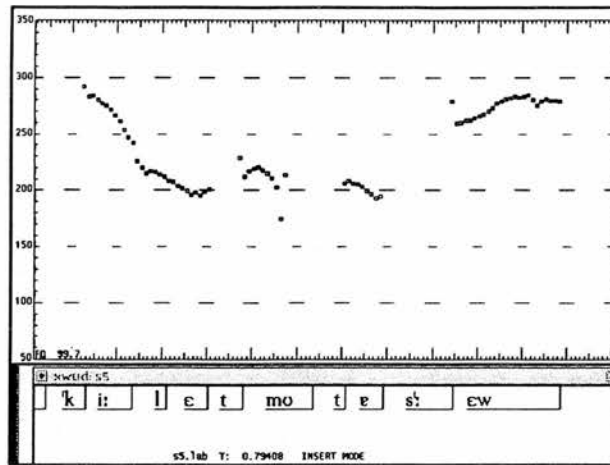


Figure 4.54 Kielet, mhux tassew?

In both these cases, the sequence of tones involved is clearly L H. Are we to interpret this tonal sequence as consisting of L% H* H% and thence to conclude that this sequence parallels the H% L* L% tune? A final example of the tune involved should help clarify this point. The contour for Example (55):

- (55) Kielet, mhux veru?
'She's eaten, isn't that true?'

shown in Figure 4.55 below consists of a L tone on the syllable preceding the stressed syllable of the tag, and a H tone starting on the stressed syllable and sustained on the following syllable.

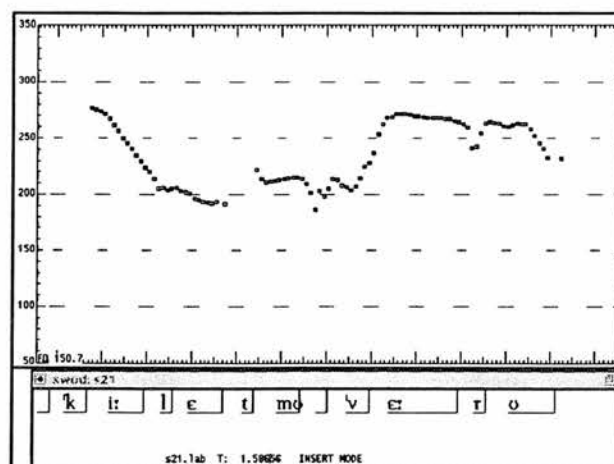


Figure 4.55 Kielet, mhux veru?

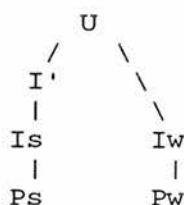
The tonal movement on the tag in this case is reminiscent of the shape of the dependent tonal movement $L+H^*$, described in section 4.3.1 and in fact, if we compare the sequence of movements involved to the sequence of movements of the examples in that section, the similarities are unmistakable. Therefore, before concluding as to the nature of the tonal movement on the negative tags, I will take a look at the inventory of tonal entities that has been established so far.

The preceding discussion indicates that apart from the nuclear tunes $L^* H_p$ and H^*+L and post-nuclear $L+H^*$ and $L^* H_i$, at least one other tonal entity, $H\% L^* L\%$, exists in Maltese. This entity has been shown to be characteristic of imperatives and positive tags as well as of vocatives.³² The negative tags discussed, on the other hand, are characterised by a tune identical to post-nuclear $L+H^*$.

It is possible for tags to be different in status (cf. for example the analysis of English tags as nuclear versus post-nuclear in Ladd 1981). However, in view of the fact that the negative tags which parallel the positive tags are assigned a tune which we have analysed (cf. Subsection 4.3.1) as a dependent tune, it is worth exploring the possibility that the vocative contour may also be an example of a dependent tune. Since dependent tunes are not normally capable of standing alone, the fact that the vocative contour can occur on imperatives appears to contradict the suggestion that the vocative contour may in fact be an example of a dependent tune. Nevertheless, the vocative contour has characteristics of dependent tunes as well as independent tunes. The most important of these characteristics is the fact that in structures such as the vocative and tag examples, the structure assigned the vocative contour can be analysed as being in a *w* relationship to the preceding *s* structure. In order to account for this fact, I conclude that, like the post-nuclear question tune $L+H^*$ and the post-nuclear $L^* H_i$, the vocative tune $H\% L^* L\%$ can also be analysed as a dependent tune. I propose

³² The tune here described is referred to indiscriminately as **vocative contour**. This is so regardless as to whether the tune occurs on a vocative structure or on structures such as imperatives and tags.

that, except when it occurs alone as in the case of imperatives, the vocative tune can be analysed as a w I-phrase attached extrametrically to a s I-phrase at a level above that of the I-phrase, a level we will call I'. In other words, the phrase containing the vocative lies outside the intonational phrase to which the s material belongs but within the same utterance, U, as this s material, thus:



Using bracketing, structures such as the following result:

$$\begin{array}{l}
 [[[[Kielet]_P]_I]_R [Joe]_I]_U \\
 [[[[Kielet]_P]_I]_R [hux]_I]_U
 \end{array}$$

The post-nuclear tag on the negative tags can be analysed in a similar way, thus:

$$[[[[Kielet]_P]_I]_R [mhux hekk]_I]_U$$

The facts noted earlier relating to the apparent independence of this tune, for instance in the imperative examples illustrated in Subsection 4.4.2, are easily explained. I suggest that the I-phrase is the domain for the realisation of the vocative contour and that the tune in question is co-extensive with the I-phrase. Thus, even in the absence

of a *s* preceding I-phrase, the tune can still stand alone. A reinterpretation of this tune in terms of its boundary attachments is therefore as follows: $H_1 L^* L_1$.

The initial tune analyses for Examples (3-11, 14-15) given in Subsection 4.1.4 can now be reinterpreted in the light of the foregoing analysis. Interpretations of the contours for Examples (1-11, 14-15) in Section 4.1 are given below:

- (1) $[[\text{Kielet?}]_p]_I$
 $\begin{array}{cc} | & | \\ L^* & H_p \end{array}$
- (2) $[[\text{Kielet.}]_p]_I$
 $\begin{array}{cc} | & | \\ H^*+L & L_p \end{array}$
- (3) $[[\text{Kielet pizza?}]_p]_I$
 $\begin{array}{ccc} | & | & | \\ H^* & L^* & H_p \end{array}$
- (4) $[[\text{Kielet pizza.}]_p]_I$
 $\begin{array}{ccc} | & | & | \\ H^* & H^*+L & L_p \end{array}$
- (5) $[[\text{Rita}]_p [\text{kielet?}]_p]_I$
 $\begin{array}{cccc} | & | & | & | \\ H^* & L_p & L^* & H_p \end{array}$
- (6) $[[\text{Rita}]_p [\text{kielet.}]_p]_I$
 $\begin{array}{cccc} | & | & | & | \\ H^*+LL_p & H^*+L & L_p & \end{array}$
- (7) $[[\text{Pizza}]_p \text{kielet?}]_I$
 $\begin{array}{cc} | & | \\ L^* & H_p(L+)H^* \end{array}$
- (8) $[[\text{Pizza}]_p \text{kielet.}]_I$
 $\begin{array}{cccc} | & | & | & | \\ H^*+L & L_p & L^* & H_I \end{array}$
- (9) $[[\text{Kielet}]_p \text{Rita?}]_I$
 $\begin{array}{cc} | & | \\ L^* & H_p(L+)H^* \end{array}$
- (10) $[[\text{Kielet}]_p \text{Rita.}]_I$
 $\begin{array}{cccc} | & | & | & | \\ H^*+L & L_p & L^* & H_I \end{array}$
- (11) $[[\text{Kilitha}]_p \text{l-pizza.}]_I$
 $\begin{array}{cccc} | & | & | & | \\ H^*+L & L_p & L^* & H_I \end{array}$
- (14) $[[\text{Pizza}]_p \text{kellha taghmililhom?}]_I$

$$\begin{array}{c}
 \begin{array}{cc}
 | & | \\
 L^* & H
 \end{array}
 \qquad
 \begin{array}{cc}
 | & | \\
 L+ & H^*
 \end{array} \\
 (15) \quad [[\text{Pizza}]_P \text{ kellha tagħmlilhom}]_I \\
 \begin{array}{cc}
 | & | \\
 H^*+LL_P & L^* \quad H_I
 \end{array}
 \end{array}$$

The tunes in the above are the two independent tunes, $L^* H_P$ and $H^*+L L_P$ and two dependent tunes $L+H^*$ and $L^* H_I$. A further tune has also been identified. This has been analysed as $H_I L^* L_I$. The inventory of nuclear and post-nuclear tunes identified is shown below. The indication of the domain of occurrence given for each tune assumes the nuclear tune to be that tune which occurs in the final P-phrase of any I-phrase. It is these nuclear tunes which have been analysed as independent tunes. The tunes occurring extrametricaly to the final P-phrase have been analysed as dependent tunes. The vocative contour incorporates characteristics of both independent and dependent tunes. Thus:

$$\left[\begin{array}{c} \text{[P-phrase]} \\ \hline \text{I-phrase} \end{array} \right]$$

$$\begin{array}{l}
 [[\quad L^* \quad H_P] \quad L+H^*] \\
 [[\quad H^*+L \quad L_P] \quad L^* \quad H_I] \\
 [H_I \quad \quad \quad L^* \quad L_I]
 \end{array}$$

There is nothing particularly unusual about the independent contours described in Section 4.2 above. My interpretation of both the post-nuclear patterns observed to occur in Maltese (cf. Section 4.3) and of the vocative contour (cf. Section 4.4) as pitch accents in their own right, on the other hand, is of great theoretical interest.

The occurrence of the post-nuclear tonal movements in Maltese $L+H^*$ and $L^* H_I$ is

dependent on the presence of both specific syntactic and pragmatic criteria and specific metrical and prosodic ones. As mentioned earlier, the distribution of these tonal movements is constrained by the phonology in such a way as for $L+H^*$ to be possible only within the same I-phrase as, but extrametricaly to, the P-phrase containing $L^* H_p$. Similarly, $L^* H_1$ is possible only within the same I-phrase as, but extrametricaly to, the P-phrase containing $H^*+L L_p$. In this respect the post-nuclear pitch accents are integrally linked to the preceding pitch accent. They nevertheless have some kind of tag-like status since the stretch of speech carrying a post-nuclear tune can often be omitted without loss of information. This fact about post-nuclear stretches of speech is captured by means of the similarity in the analysis of post-nuclear tunes to that of the vocative contour.

Chapter 5

THE IMPLEMENTATION OF PROSODIC STRUCTURE AND INTONATION IN MALTESE ENGLISH

In view of indications (cf. Chapter 1, Section 1.3) that the prosody of ME is markedly different from that of SE, as well as of evidence of a certain amount of transfer into ME from Maltese (cf. Chapter 2, Section 2.3), this Chapter attempts to determine some of the distinguishing prosodic characteristics of this variety.

Work on prosodic aspects of ME is limited. Amongst the facts relating to the prosody of ME that have been mentioned is the influence on its rhythm of the rarity with which /k/ is realised (cf. Subsection 2.3.1.2; also Calleja 1987 and Mazzon 1992). The phenomenon of stress-shifting in ME to conform to Maltese stress patterns has also been noted (cf. Subsection 2.3.2 and Mazzon 1992). Of greater interest to the brief investigation of the prosody of ME in this Chapter, however, is the conclusion reached by Calleja (1987:112) relating to the rhythmic organisation of ME:

Although Maltese speakers usually pause at grammatical boundaries, they pause much more frequently [than SE speakers], usually at every grammatical boundary. Thus, utterances are broken up into a greater number of tone groups.

According to Calleja, one of the implications of the above is that:

Changes in pitch patterns and the occurrence of tonic stresses are much more frequent.

A similar claim is made by Mazzon (1992:128). In her view, it is not necessarily the case that sentence stress (Calleja's "tonic stresses") occurs more frequently in ME than in SE but rather that sentence accent in ME is often shifted to a position in the sentence earlier than its end. The examples she quotes, I gave it TO him. and I DON'T know. involve a shift of sentence stress (indicated by means of CAPITALS). The shift in sentence stress in examples such as these results in differences in the prosodic organisation and intonation of ME as compared to SE.

The above suggests that the patterning into groups (prosodic structure) may have more to do with the impression of "accent" in ME (cf. Section 2.3) than differences in the choice of pitch patterns (intonational form) and provides justification for my pre-theoretical decision to focus the investigation of aspects of the prosody of ME in this Chapter precisely on the two areas of prosodic structure and intonation.

Differences in the prosodic implementation of ME as compared to SE are easily identified. To take just one example, an ME rendering, as indicated, of the following sentence:


Are you coming, Francesca?

has a prosodic form which is clearly different from any possible SE rendering for the same sentence. Cross-linguistic comparison, however, is not simply a matter of identifying differences in prosodic form. It is also necessary to provide an explanation of the differences occurring. As Cruttenden (1986) points out, cross-linguistic comparison in the area of prosody is plagued with difficulties. In view of this and in order to simplify the exposition somewhat I concentrate on structures which have what Lindsey (1985) calls the " π -function of interrogativity". In particular, a detailed examination is carried out of a number of yes-no questions taken from eight Map Tasks elicited as described in Subsection 1.3.3 (Section 5.1). A brief examination of the role of prosodic choices in the signalling of interrogativity concludes the Chapter (Section 5.2).

5.1 Interrogativity in yes-no questions in Maltese English

This section examines the intonational form of interrogativity in yes-no questions in ME. In so doing it attempts to establish the role played by prosodic structure in intonational choice.

5.1.1 Yes-no questions

Let us examine the F0 contours for a number of yes-no questions taken from the Map Task data. The first example shown below involves the F0 contour for Example (1):

- (1) Is that all?

This is shown in Figure 5.1 below.

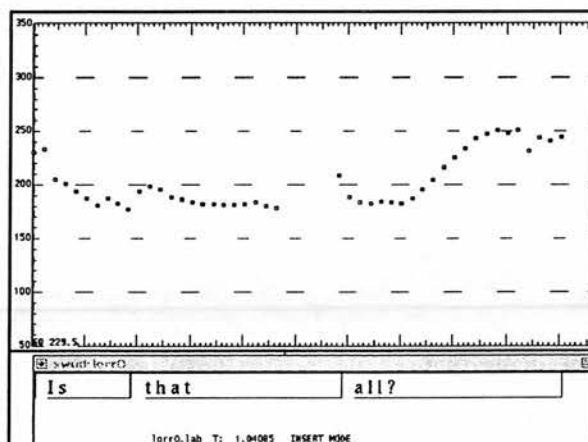


Figure 5.1 Is that all?

The F0 contour for this example is characterised by a rise in F0 from a L tone on all to the end of the phrase. A similar pattern of realisation can be observed in the F0 contour for Example (2):

- (2) You understand?

shown below in Figure 5.2.

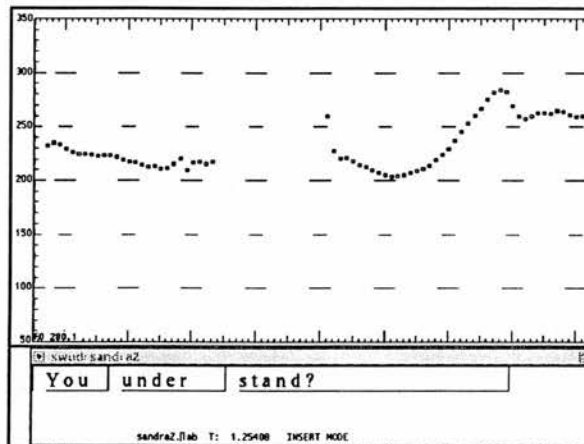


Figure 5.2 You understand?

In this case the lowest point in the F0 contour occurs on the final stressed syllable of understand. A rise then ensues to the end of the phrase. Example (3) has a stressed syllable penultimately in the phrase:

(3) Are you drawing?

The F0 contour for this example is shown in Figure 5.3 below.

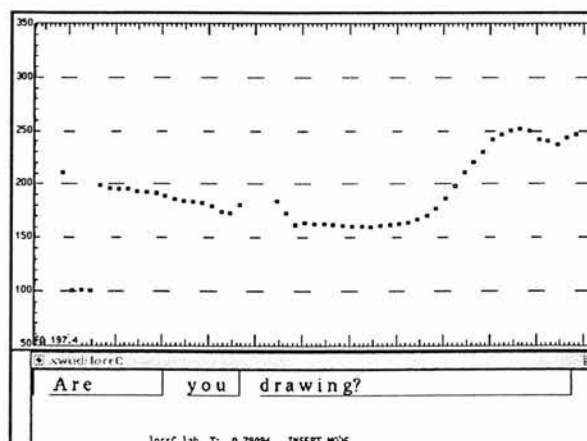


Figure 5.3 Are you drawing?

The lowest point in the F0 contour in this case occurs on the stressed syllable of drawing. There is then a rise in F0 to the end of the phrase.

The F0 contour for Example (4):

(4) Can we compare?

is shown in Figure 5.4.

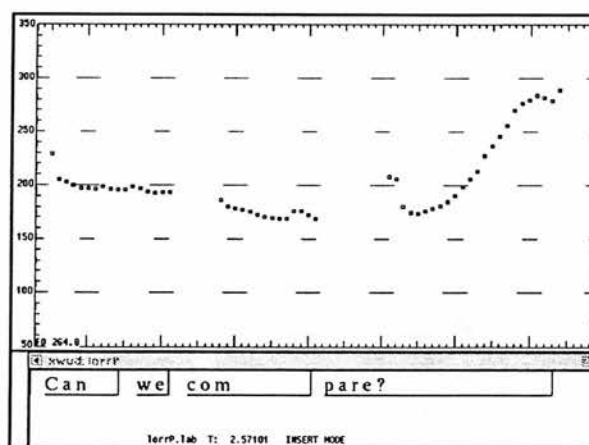


Figure 5.4 Can we compare?

Once again there is a L tone on the stressed syllable of compare and a rise in F0 to the end of the phrase.

There is an obvious similarity between the F0 contours for Examples (1-4). This is the

fact that the F0 contours for the examples are characterised by a sentence-final rise in F0, a rise which can be analysed as being nuclear. Two examples having a sentence-final nuclear rise in F0, as well as a longer pre-nuclear stretch than in the foregoing examples, can be seen in the F0 contours for Examples (5) and (6):

(5) Is there an abandoned cottage?

(6) Do you have the old mill?

shown respectively in Figures 5.5 and 5.6.

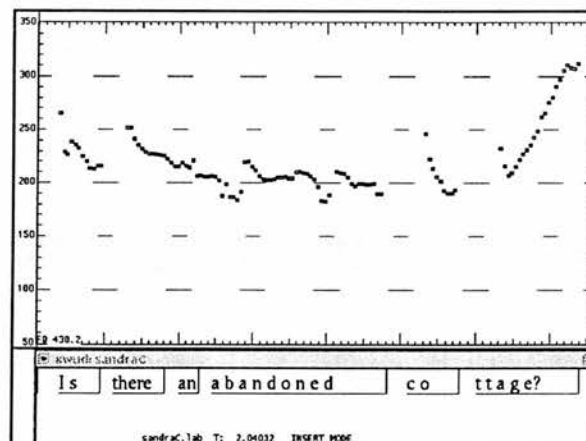


Figure 5.5 Is there an abandoned cottage?

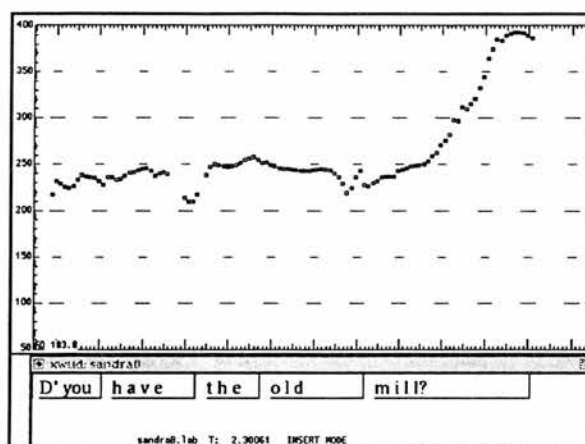


Figure 5.6 Do you have the old mill?

Like the F0 contours for Examples (1-4), the F0 contours for these examples are characterised by a sentence-final nuclear rise in F0. The lowest point in the F0 contour for Example (5) occurs on the stressed syllable of cottage. This is followed by a rise in F0 to the end of the phrase. A similar sentence-final rise in F0 can be observed in the F0 contour for Example (6). There is a L tone on the stressed syllable of mill immediately followed by a rise in F0 to the end of the phrase.

In all the yes-no questions illustrated above, a nuclear rise occurs sentence-finally. In all cases, this rise consists of a rise from a L tone to a H tone at the end of the phrase. The examples presented below differ from Examples (1-6) illustrated above in that the nuclear rise occurs early rather than late. Thus, for instance, Example (7):

(7) You know what I *mean*?

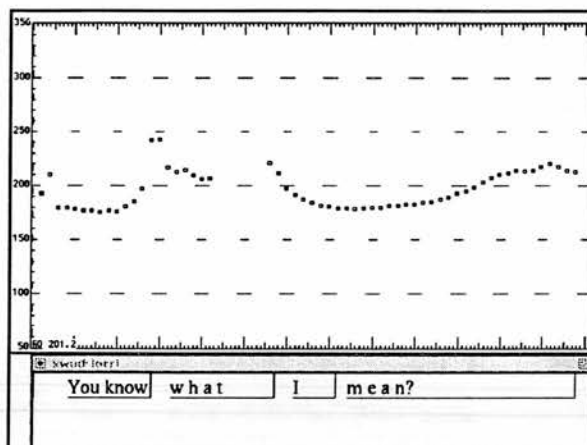


Figure 5.7 You know what I mean?

In this case there is a rise in F0 from a L tone on the stressed syllable of know to the end of know. This is followed by a slight fall in pitch on I rising again on mean. A clearer example of this type of contour can be seen in the F0 contour for Example (8):

(8) You have the fort?

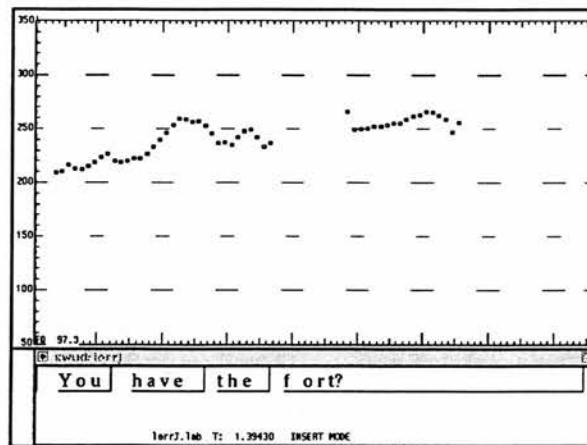


Figure 5.8 You have the fort?

Once again, in this case, there is an early rise in pitch from a L tone on the stressed syllable of have to the end of have. F0 on the fort is sustained at more or less the same height as that at the end of the rise on have.

The F0 contour for Example (9):

(9) You have Crane Bay at least?

shown below in Figure 5.9 also has an early nuclear rise on you have.

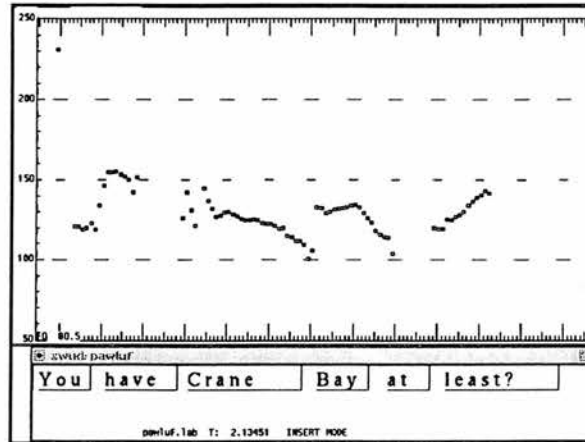


Figure 5.9 You have Crane Bay at least?

I analyse the pitch contour following the rise as consisting of a L tone on Crane followed by a slight rise to the stressed syllable of Bay. There is then a lowering on at followed once again by a rise on least.

A clearer case of an example having an early rising tune can be seen in the F0 contour for (10):

(10) Do you have a caravan park?

shown in Figure 5.10 below.

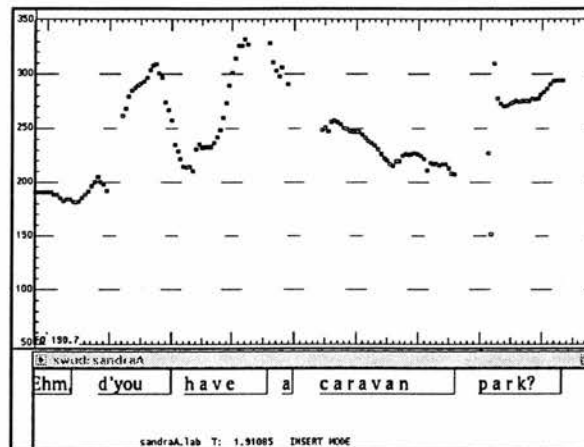


Figure 5.10 Do you have a caravan park?

This consists of a rising movement from a L tone on have to a H tone at the end of have. There is then a fall in F0 to the end of caravan. A rise in pitch to the stressed syllable of park then ensues.³³

5.1.2 Interpretation

First of all, I assume that the nuclear rising tune in ME corresponds to, amongst others, O'Connor and Arnold's (1973) high rise, Bolinger's Accent C (1978, 1986, 1989) and Pierrehumbert's (1980) L*H⁻. It consists of a L H sequence of tones. The L tone in the sequence attaches to the stressed syllable of the nuclear stretch of speech whilst the H tone attaches to the edge of this nuclear stretch of speech. In order to avoid entering into

³³ The speaker appears to treat caravan park as a phrase rather than as a compound, thus assigning primary stress to its final (monosyllabic) element park (cf. Subsection 2.3.2.2).

a debate as regards the representation of the said tune I refer to it simply as L* H.

The nuclear rising tune in the above examples has the form L* H both when it occurs sentence-finally and when it occurs earlier in the sentence. The post-nuclear tunes in the examples above having an early nuclear rise have a number of features in common. First of all, regardless of the segmental and syllabic structure of the material following the nuclear rise, the stressed syllable in the post-nuclear stretch of speech is always characterised by relatively high pitch. Moreover, in cases having at least one syllable intervening between the H tone at the end of the nuclear rise, and the slightly lowered but relatively still high F0 on the stressed syllable of the post-nuclear stretch of speech, pitch does not simply fall gradually to the end of the phrase. Rather, there is a fall in F0 following the end of the nuclear rise. This fall in F0 continues to the syllable preceding the stressed syllable of the post-nuclear stretch of speech, F0 then rising again to the H on the stressed syllable.

Two possible analyses of Examples (7-10) come to mind. The first possibility is that two separate phrases, each containing its own separate nuclear tune, are involved. Such a solution bypasses objections raised by many of the traditional accounts of the structure of intonational tunes which preclude an analysis in terms of a post-nuclear accent-related tonal movement (cf. Section 3.3, in particular Subsection 3.3.2). The second possibility is for the post-nuclear tune to be analysed as occurring within the same phrase as the nuclear tune.

Regardless of which analysis is chosen as the correct one, the observations made as to the form of the post-nuclear tunes in the examples examined above suggest that F0 on the stressed syllable of the post-nuclear stretch of speech does not result from a mere tailing off in pitch following the H tone at the end of the nuclear stretch of speech. Rather, F0 falls to a L tone on the syllable preceding the stressed syllable of the post-nuclear stretch and then rises again to a H tone on the stressed syllable. An analysis of the post-nuclear tune in Examples (7-10) similar to the analysis of the post-nuclear question tune in Maltese is therefore proposed. In other words, the post-nuclear tune is analysed as consisting of a L H sequence of tones. The post-nuclear tune is accent-related in the same way as is the nuclear question tune. However, unlike in the case of the nuclear question tune, the L tone in this case attaches to the syllable preceding the stressed syllable while the H tone attaches to the stressed syllable, thus L H*.

The suggestion of influence from Maltese is impossible to avoid if one looks at the descriptive facts about the intonational phonology of Maltese. There is a striking similarity between the analysis of the post-nuclear tune in Examples (7-10) above and that of the post-nuclear tune in Maltese in Subsection 4.3.1. The nuclear question tune in Maltese, L* H_p always occurs P-phrase finally. If, however, the P-phrase containing the nuclear tune occurs early within a particular I-phrase and is followed by a structure to which it is metrically bound in a s-w relationship, a L+H* pitch accent occurs on the stressed syllable of the post-nuclear stretch of speech. As we have seen, the examples from Maltese English also seem to have the possibility of a L H* following an early

nuclear L* H. I suggest that the correct analysis as regards the prosodic structure of sentences having an early nuclear tune is one involving the post-nuclear tune being bound in a s-w relationship to the preceding nuclear tune. In other words, post-nuclear tunes in ME, like in Maltese, occur within the same I-phrase as, but extrametrical to, the P-phrase containing the nuclear tune. Although only preliminary, this may constitute evidence for influence on Maltese English from Maltese.

5.2 Prosodic choice

Unlike English, which, as Lindsey (1985:3) claims, "demonstrates a rather extensive intersection of tonal structures and π -functions", Maltese tends to realise interrogativity more by tonal means than by other kinds of marking such as morphosyntactic marking (cf. Subsection 2.1.2.1). Thus, for instance, although interrogativity in an example of an inverted yes-no question such as Is that all? in Example (1) seems to be marked by a rise similar to that in SE, ME is quite likely to use a non-inverted alternative of the question in (1), That's all?. The intonational structure of the alternative That's all? differs from that for Example (1). ME thus differs from SE in allowing the possibility of the non-inverted question in cases where SE would be more likely to use an inverted yes-no question. In other words, at this level, the difference in intonational structure appears to be more a function of syntactic, than of intonational, choice. Lindsey claims that:

On inverted questions the distinction between low and high rise does not seem to be categorical since the distinctive power of the high rise to 'force' an interrogative interpretation is masked by the inherent interrogativity of the morphosyntax.

It is suggested that the fact that ME often uses morphosyntactically non-interrogative structures to signal interrogativity results in a greater use of the high rising tune in ME than in SE. An area worth investigating in greater detail is the possibility of influence from Maltese on ME at the level of the phonetic implementation of tunes which are similar in Maltese and English. For example, the fact about the late alignment of L* in the nuclear question tune in Maltese, noted in Subsection 4.2.1, may result in differences between ME and SE in the phonetic implementation of the nuclear question rise in cases where prosodic choice does not in fact differ.

CONCLUSION

6.1 Tonal phonology of Maltese

The analysis of the tonal phonology of Maltese proposed in this thesis identifies tunes as follows: $L^* H_p$, $L+H^*$, $H^*+L L_p$ and $L^* H_l$ and $H_l L^* L_l$. A pre-nuclear H^* has also been noted to occur within the same P-phrase as either of the two nuclear tunes $L^* H_p$ and $H^*+L L_p$. On the basis of the data analysed here it is unclear whether a pre-nuclear tune in a separate, preceding, P-phrase to that containing the nuclear tunes is to be analysed as a sequence involving $H^* L_p$ or whether as $H^*+L L_p$.

Involved in the make-up of the tunes identified are the pitch accents L^* , H^*+L , H^* and $L+H^*$ and the boundary tones L_p , H_p , L_l and H_l . I assume that the structural positions for the association of the tones in the system are stressed syllables and boundaries. Like Hayes and Lahiri (1991) and Grice (1992) I conclude that it is possible for structural positions to be left empty. Pitch accents in Maltese can occur post-nuclearly as well as nuclearly and pre-nuclearly. A distinction is drawn, however, between nuclear and pre-nuclear tunes which occur in independent domains, and post-nuclear tunes which occur in dependent domains.

Even in the absence of a realised L tone in the post-nuclear question tune, the specification of L is important in that it captures the distinction between pre-nuclear H^* and the post-nuclear tune $L+H^*$. The distinction between boundary tones which

attach to P-phrase boundaries and those which attach to I-phrase ones successfully captures the distinction between the nuclear question tune $L^* H_p$ and the post-nuclear statement tune $L^* H_I$.

The minimal permissible combination in a phrase is one involving either $/T^* T_p /$ or $/T_I T^* T_I /$ but never $/T^* T_I /$. In other words, within any I-phrase, the minimal permissible sequence must either contain a T_I at either edge of the phrase or a T_p at the right edge of the phrase. The fact that neither the post-nuclear question tune, $L+H^*$, nor the post-nuclear statement tune, $L^* H_I$, measure up to this minimal permissible combination may be a reason for the dependence of these tunes on their nuclear counterparts.

As in Hayes and Lahiri's account of Bengali intonation (1991), I conclude that the P-phrase is the domain of focus and that H_p serves to demarcate the right edge of this domain. The notion of a prosodic hierarchy which allows w elements to be attached extrametricaly to s elements within some higher level domain is crucial to the analysis of Maltese intonational phonology. Post-nuclear pitch accents in Maltese occur outwith the focus domain which is the P-phrase but within the same I-phrase as that P-phrase.

The phonetic implementation of the above tonal entities will be worth investigating in detail in later work. Amongst the areas worth investigating further is that relating to the asymmetry involved in the timing implementation of the nuclear question tune as compared to that of the nuclear statement tune. Thus, while L^* aligns late in the

accented syllable, H* in H*+L aligns early in the accented syllable. It is this asymmetry which leads to the analysis of the nuclear question tune as consisting of a monotonal pitch accent followed by a boundary tone as opposed to the analysis of the nuclear statement tune as a bitonal pitch accent followed by a boundary tone.

6.2 Evidence of transfer of characteristics of Maltese to the tonal phonology of Maltese English

As suggested by Calleja (1987), Mazzon (1992), the influence of Maltese on ME is most obvious at the level of phonological phrasing rather than at that of intonational choice. In fact, data such as that analysed in Subsection 5.1.1 suggests that it is often the case that differences in intonational choice are triggered by differences in prosodic structure. Differences between the tonal inventories of ME and SE may possibly stem mainly from the fact that ME, like Maltese, allows specific tunes to occur post-nuclearly, tunes which are accent-related in the same way as are nuclear and pre-nuclear patterns. Thus, in cases involving a post-nuclear stretch of speech, ME tends to use patterns of implementation on the post-nuclear stretch similar to those of Maltese.

Differences between ME and SE as regards the phonetic implementation of aspects of prosody may also be in evidence. Such differences may well prove to be a fruitful avenue of research. Thus, for example, according to Pierrehumbert (1980:77), the second in a sequence of tones in English occurs at a specific time distance from the stressed syllable. I suggest that the independent question tune in Maltese may differ from the question tune in English analysed by Pierrehumbert (1980) as L*+H⁻ in that

the realization of the H tone in the question tune sequence in Maltese is determined by factors of phonological phrasing rather than of timing, hence the analysis of the nuclear question tune in Maltese as L* H_p. In the context of work on the influence of Maltese on ME, it will be worthwhile investigating whether the apparent differences in the analysis of the nuclear question tune in English and that proposed here for the nuclear question tune in Maltese are reflected in the actual implementation of the tunes.

The analysis of prosodic structure and intonation in Maltese has implications for future work in the design and implementation of a text-to-speech system for Maltese. The model of intonation proposed can also be applied to the design of teaching tools such as the SPELL workstation designed by Hiller et. al. (1992) for teaching aspects of the prosody of a number of European languages. A workstation of this sort also has implications for doing speechwork with the hearing-impaired.

Work on aspects of the prosody of Maltese English, however, preliminary, may also have interesting implications. Apart from the usefulness of comparative data to the teaching of English as a second language, work of this kind is also useful from the researcher's point of view in that it throws light on aspects of the target language which may otherwise go unnoticed. The identification of the vocative contour in Maltese resulted precisely from an examination of differences between ME and SE as regards the tonal implementation of structures such as vocatives and tags.

APPENDIX A

The myth of "Maltese-English"

From Mr. Marcus Flores.

SIR, — Let me dispel a long-in-the-tooth, die-hard myth. The Maltese are not the linguists they are believed to be. They do not speak English. They limp through it.

They do not speak Maltese, either; unless by Maltese you mean the usual *parlata*, that hodgepodge of ambiguity and mediocrity, limited vocabulary replete with barbarisms, code-switching and howlers. Nor could they ever speak English well.

In the early 1950s, all teachers in certain schools were strictly bound to speak English at all times; except, of course, during the period devoted to the sterile study of an archaic Maltese checklist of the pundits' resurrection of fossils and long-dead words.

Few teachers spoke good English, even in those days; for many it was just an acceptable version, and a dull one at that. The majority struggled through a stilted and unnatural, spectral semblance of the English language, one that was rife with execrable pronunciation and obnoxious intonation. Although mistakes (in the strictest sense of the word) were not made, it was nonetheless a brand of English that somehow seemed to be trapped in our inexorable, insular time-warps. I still remember a saintly religion master, a stickler for grammar this one, reproach a schoolmate for his childish peccadilloes: "Micallef, thou art a fool!"

As such, certain current assertions by respondents do not surprise me. Can anyone learn a language if constantly bombarded with anachronisms, and worse?

As for the envy to which someone has alluded, I do not believe that the

From Mr. A. Mizzi.

SIR, — Dr. Anthony Charles (*The Sunday Times*, November 3) wants to give a wry twist to the meaning behind "Triq il-Mahsel".

Living in Mafsaqala, as he does, he should know that il-Mahsel is a pond-like formation between the rocks at St. Thomas Bay, a stone's throw from where he lives.

Of course the name is derived from the fresh water pool found in wash-houses where Maltese women used to do their laundering in the past. It can also mean a wash-house, a lavabo, a washtub or a lavatory — if you so wish.

However, I am afraid that the funny (or is it unclear?) connotation given by your correspondent is gratuitous. It rather betrays the aversion some people have for things Maltese, be it the sound of their own native language or just a lexicographic curiosity of folkloristic value. And if as a nation we have quite a number of people who are ashamed of the very sound of their own mother tongue, then I should say that we are in a sorry mess indeed.

My advice to your correspondent is this: "Bear it, Sir, the people who live in Bath, are in the same predicament."

Yours truly,
A. MIZZI

From Mr. Paul P. Borg.

SIR, — Is it not strange that street naming in Maltese only should stir a myriad of interpretations by some of your correspondents? I have managed to make out the following:

- (a) dropping the English version is grossly anti-British.
- (b) the English version is indispensable to the English-speaking visitor.
- (c) bilingual street naming is a sign of courtesy and well-lubricated efficiency.
- (d) street naming in Maltese only is desired by xenophobes only.

Yours truly,
P.P. BORG

Street names in Maltese

Letters to the Editor

A common denominator to these reasons may be the fact that 27-year-old Lady Independence-and-Identity has not yet been understood by some, whose minds still boggle with colonial mentalities.

The tourist loves the fascination of discovering something new and unique, and when coming to Malta would not cherish the sorry attempt some people make to render Mediterranean Malta an extension of far-away England.

No one would dream of calling the European countries discourteous or inefficient if they choose to name their streets and alleys only in the vernacular.

Street naming in the vernacular should be a natural matter-of-fact procedure and, surely, not even an item for discussion. No citizen in the United Kingdom, Italy, Germany, France or anywhere else would dream of insisting that the authorities start naming streets in another language as well! He would be ridiculed, and rightly so....

I am sure the authorities will in future feel the need to seek and encourage further expression of national identity in many other fields, and that more citizens will realise this need when they start severing the bonds with colonial attitudes and mentalities. Only little minds, in fact, would mistake national pride in an identity of our own for xenophobia!

It is wrong to interpret street naming in Maltese only as an obsession with the Maltese language. This is deliberate twisting of the argument. It is also difficult to comprehend how one could encourage better idiomatic Maltese by the broadcasting media and yet be so naive as to fail to realise that the Maltese language is the cornerstone of our identity.

Yours truly,
P.P. BORG

Mosta.

The Maltese potential

From Mr. Frans Sammut.

SIR, — From my good friend Fr. J. Ghigo's missive (*The Sunday Times*, November 3) we learn that in order to communicate with him one must send out one's letters a month or so beforehand.

To be precise, prior to the publication of this information he had let me know of such prerequisites verbally with reference to two occasions, one of which was the Mediterranean Languages Conference I mentioned on October 13 — the occasion when scholars worth their salt ought to have flocked in appreciable numbers.

I did not mention those who were absent by name. Else I would have expressed my admiration for those who did turn up, like Judge Wallace Gulia, among others. I trust the latter will forgive me for my omission.

Such was my chagrin at the absence of people who are wont to pontificate on Maltese, that I overlooked those who showed dedication to the national heritage to which others simply pay lip-service.

Inversely I was gratified to see Professor Albert Borg, a professional linguist, turn up at the seminar called by the *Akkademja tal-Malti* with a view to revising and updating the *Tagħrif*, and actually make his valid contribution along with the *Akkademja* members. Time was when *Tal-Qroqq* would call on the *Akkademja* as seldom as great Birman Wood's coming to High Dunsinane.

If there are lessons to deduce from the whole affair — and Fr. Ghigo is apparently fond of lessons — one of them is that participating from the floor rather than the panel is at times salutary. After all, there were people on the *Akkademja*'s panel who never studied Maltese formally at undergraduate level. Listening to Professor Borg's expostitions must have been, to them, as useful as would their participation in the Mediterranean Languages Conference, endowed as this was with the input of learned contributors like

Professors Varvaro and De Simone. Persisting in burying our heads in the limited sands of our archipelago will continue to restrict our vision of the real nature of the Maltese language. This in turn will make us vulnerable to every Tom, Dick and Harry who relishes taking pot-shots at the language that makes us a distinct nation with all the attendant privileges.

A cursory look at the columns of this paper will suffice to convince the *Akkademja tal-Malti* of the dire need there is to defend the dignity of the mother tongue against the insidious attacks of linguistic nonentities and the thoughtless tirades of common nincompoops....

Yours truly,
F. SAMMUT

Zebbug.

Maltese and English

From Mr. Mario Serracino Inglott, SIR. — We have often been praised by foreigners for having our own language and at the same time being able to assimilate international expression to welcome, entertain and make foreigners feel at home. But foreigners have also with some disdain noticed the disregard for the Maltese idiom in commercial activity, adverts and other information meant mainly if not only for local consumption.

Whereas everyone is free to choose his own way of expression Daphne's rather squalid humour about Maltese "tending itself to profanities" (*The Sunday Times*, November 10) brings to mind the times when other so-called Maltese citizens considered our beautiful language as being only good for the kitchen.

Going back to revive old dreams — and bad ones at that — is neither 'humour' nor 'logic'. What is tragically humorous is the common farcical conversation between two Maltese women discussing their shopping spree and future evening adventures in a language which they seem to be able phonetically to produce without any real knowledge of its grammar. This grotesque situation is meant to imply that the speakers are 'parlour maids', rather than 'kitchen cooks' or simply Maltese housewives.

If Daphne truly wants to eliminate, may eradicate, class hatred and political polarisation, she has first to limit her own shots at the parties that could get hurt most. At times it could be interesting to read her trivialities, but I sincerely hope that Chaucer, Addison, Johnson, Bacon and the old-time pioneers of journalism of a great language are left out of this melleé which is entirely Malta-made.

I cannot but remind Daphne that with the unfortunate apathy that seems to be undermining our common faith, the other only factor that could truly unite us is the language

we inherited from our forefathers, a language for which they struggled to see recognised one day as our national tongue!

I ask Daphne to shoot at the right game and let us enjoy her wit; she should not spare anyone, particularly politicians, but she should remember that even that lady on the pavement engrossed in gossip gibberish is as much to blame for the sad confusion that exists on our beloved Islands.

Yours truly,
M. SERRACINO-INGLOTT
St. Andrews.

From Mr. Evarist Saliba.

SIR. — The use of Maltese and English, or Maltese only, in street names is creating a heated debate where common sense should prevail. The purpose of a street name is to facilitate direction-finding. Other considerations may also be taken into account, but these should not overshadow the basic purpose of giving names to streets.

Thus I am not impressed by those who would use street names to resuscitate obscure or defunct Maltese words which have no link with the area where they are imposed. It makes sense to keep alive *Triq ta' l-lbraġ* (one's please), but not to create *Triq il-Kaffis*. Whether English should also be used becomes almost irrelevant at this point. Would *Kaffis Street* be any more helpful? On the other hand, *Old Oil Measure Street* might! It will make the meaning clear to the locals as well!

It is a pity that a false sense of patriotism is leading to the obliteration of names which had won a valid place in Maltese life. Why not *Rue d'Ar-ġen*, or *Piazza Regina*, or a *Strada Rjali*? Why destroy the attractive ceramic and quasi-permanent bilingual street names, just to eliminate the

Letters to the Editor

English version when it is doing no harm, may serve a useful purpose, illustrates a phase in our history, and is no slur on our national identity?

The need for new names will always be present, but these should add to our heritage and not create an artificial one at the expense of an older one. I support those who appeal for brevity in street names. Let us not be pedantic. If a chosen street name is so obscure that it needs an explanation, this reflects badly on the merits of the choice. Still, if need be, let us have a separate plaque to do this. In some parts of old Madrid colourful pictures are used to explain traditional names whose meaning has become obscure.

If I may refer to the related issue of the status of the Maltese and English languages, I would point out that English is not widely spoken in Malta because of its official status; rather the opposite holds good, irrespective of the political and other considerations that brought this about.

English has assumed a very important and practical role in our daily life, in our economic lifeline contacts, in our education especially at the technical and higher levels, and in our links with the international community, with all that this implies.

The more efficient we are in the use of English, the more efficient we will be as a nation in the international community; the greater respect we will command, and the greater will be the acknowledgement of our identity. I do not see why this should be at the expense of the Maltese language, which unfortunately can never play the same role. What hurts our national language is inefficient or dull teaching, as well as careless and unfocused use, especially by the example-giving wielders of the media and other means of mass communication.

The way to an enhanced status for the Maltese language is not through imposition or the downgrading of the

English language. Rather this should with him; however, although I tend to agree with most of his arguments, and judicious use, in a manner which is satisfying and practical, and therefore generally acceptable.

Government, national institutions, the media and other non-governmental organisations all have a role to play in encouraging the use of good Maltese. But finally, it is the people who will be the arbiters of which language suits their needs better.

Yours truly,
E.V. SALIBA
Ta' l-lbraġ.

From Mr. V.J. Pace.
SIR. — On November 20 I heard what was supposed to be a discussion on TVM. It turned out to be anything but a discussion. It was simply a means to promote Maltese literature.

I am not against promoting the Maltese language. Far from it, I am old and one of my regrets in life is that during my school days the teaching of Maltese was non-existent and I am therefore unable to write my own language correctly. This is something beyond my control.

During the one-sided "discussion" on TVM it was stated that in some schools, even today, students are being punished because they speak Maltese in class. When I was a student at the Lyceum in the early Twenties, students were compelled to speak English because the teacher was an Englishman. Similarly, during the hour of Italian students were obliged to speak Italian because the master was Italian.

The members of the panel criticised those who emigrate and return to Malta after a few years, feigning they have forgotten Maltese, or that a young mother tells her baby daughter *halli nibhlepjak* or something similar. Well, these are exceptions and sporadic examples and those who act in this manner are silly.

Mr. Frans Sammut should control his temper and not involve himself in a heated argument because a Mr. Bonello from Ta' l-lbraġ disagreed making up the Outer Hebrides.

Today it is very difficult to encourage the young to speak Gaelic in their everyday lives especially when in competition with English-speaking, English-driven media.

Native language road signs are a small step in bringing Gaelic into everyday use. Idiosyncratic perhaps, but complacency is a dangerous game to play with language and culture.

Let's hope Maltese never plumbs the depths Gaelic has reached, since with people of "Blue's" broad mind and lack of prejudice I doubt it would survive.

Yours truly,
T. FERRIS
Glasgow, Scotland.

Maltese because they will be able to understand English well enough. I dare to call this fanaticism as these people are even endeavouring to induce Government to correspond only in Maltese. I regret to say that they have been partly successful.

What I strongly object to is that most writers of Maltese are not striving to promote the Maltese language; their ultimate aim seems to be to eradicate the English language and destroy whatever is English.

Let us not discard the greatest asset that the Maltese people possess — that of knowing how to read, write and speak English well.

Yours truly,
V.J. PACI
Silema.

From Mr. Tom Ferris.
SIR. — "Blue" (*The Sunday Times*, November 3) finds Mr. A. Sammut illogical and prejudiced whereas he himself has a somewhat broader outlook. He cannot comment on "Malti's" contribution on the Outer Hebrides since he has not been there but then sneers at "Gaelic idiosyncrasies". So much for lack of prejudice and his broad outlook.

Union with England brought suppression of Scottish culture, language and dialect. Indeed until very recently children were disciplined in school for speaking their native tongue. Gaelic, which at one time was widely spoken in North Scotland, is now only heard in the isolated islands making up the Outer Hebrides.

Mr. Frans Sammut should control his temper and not involve himself in a heated argument because a Mr. Bonello from Ta' l-lbraġ disagreed making up the Outer Hebrides.

From Professor Mark P. Brincat, Ph.D (Lond), MRCOG,

SIR, — Every now and again, it seems, a particular section of society sees fit to whip up a language question. Once more, it seems, we are in the middle of a quasi-hysterical attack by the ultra-pro-Maltese forces on everything that is not pure village talk. This unilateral assault has been defined variously as being anti-classist, anti-colonialist, patriotic and intellectual, among others.

I fail to see why these gentlemen find it necessary to do this. Maltese, an ancient, beautiful language, was encouraged and promoted partly for political reasons in the 1930s, when a grammar with rules of writing and so on were created. Politically, this was used to counter the official language that for centuries was Italian.

This resurrection, coupled with the war, destroyed the Maltese-Italian language in the islands that had been used for official purposes and among a certain section of the community since medieval times. I fail to see the gain in this. Maltese-Italian was a special form of Italian and has only recently started to attract some attention. It was a version of Italian that

In defence of Anglo-Maltese

was just as valid as Roman Italian, Neapolitan or Florentine Italian. Now it is lost, only for it to be slowly replaced by RAF Italian (including dubbed film Italian).

After 200 years of close association and indeed intermarriage with the British, it is not surprising that a body of Anglo-Maltese exists, both in customs and in language. This is now just as much part of our Maltese culture.

It is absurd for so-called intellectuals and pseudo-intellectuals to declare that the English spoken by the Maltese is not English. Coming from university professors this is even more astonishing. For what is proper English? Are the dialects of English not responsible for constantly enriching the language? Are Newcastle English, Scottish English or for that matter West Indian English, Indian English, Hong Kong or Singapore English, not to mention American, Australian or South African English, not equally valid forms of English?

This is not to say that efforts should not be made to use grammatically correct English just as efforts are

your as it has always been and is our guarantee for success in the future.

Anglo-Maltese is something to be proud of and if a section of the population cannot understand the intrinsic humour in the expression "Will you wassaleji me", and can only suppose that it is ignorance that leads to such a statement, then it is only a sad reflection of how little they understand their fellow Maltese.

It is in this atmosphere of supercilious arrogance that our education system is getting messed up and our children confused. The Maltese language has its important place in our society. It is vigorous and doing well. Maltese English also has its place and it is about time that it too, a minority language in our country, is defended. Otherwise, it will follow the sad fate of Maltese-Italian — an irreparable loss to our overall Maltese culture.

Languages should be a vehicle to promote understanding between people and not to place them into narrow strait-jackets cutting them off from fellow communities and the outside world. This is true freedom of speech.

St. Julian's. Yours truly, M.P. BRINCAT

view surely we have had more British people settling here and intermarrying than any other previous ethnic groups that have colonised us. British settlement is still continuing unabated 200 years later.

For decades, we have been forced to learn quasi-extinct Maltese words and live in streets like Triq il-Sirk or Triq il-Mahsel, which although I am sure might have quaint meanings might not be considered appropriate by the community that actually live in them.

Where is the democracy at community level that has been promised? Surely a local community should have the right to call its streets the way it likes, indeed the way areas used to be called historically. Within certain aesthetic guidelines a community should have the right to organise the sort of plaques it wants.

Claims have been made that if people speak in more than one language they will inevitably have muddled thinking. All I can say is that we have medical students who take histories from patients in Maltese then present in English and write essays in English but talk between themselves in Maltese or Maltese English. Both at undergraduate as well as at post-graduate level, they consistently do as well as, if not better than, British candidates at British exams, who only tend to know one language.

I am no linguist but one does not have to be a linguist to defend what comes naturally to a considerable segment of the population. Bullying students into admitting that they speak English because it gives them a sense of superiority is not a scientific way of investigating the subject. Anybody who knows anything about interviewing techniques can confirm this. It is inquisitorial and completely misses the point.

Anglo-Maltese culture needs to be taken seriously since this part of Maltese culture is a dynamic one and is responsible in a large part for the rapid development of these islands in recent history. It continues to give Maltese society a cosmopolitan flavour.

Yours truly, ECONOMIST
Sliema.

Letters to the Editor

made to speak grammatically correct Maltese.

To a considerable portion of the Maltese population "Ma, how shy" is a natural expression and only people who persist in outmoded ideas of class war and class struggle call this *kulhai*.

Understanding between us Maltese is necessary, but this has to be a two-way affair. Sacred Heart girls are just as Maltese and part of "il-poplu" as girls from other parts of Malta. Maltese English is a form of English in its own right and I am sure that linguists would find it fruitful to study.

Surely this is one area that the Department of English at the University should be pursuing. It is part of Maltese culture and it is absurd to criticise those who speak it as having a colonialist mentality. After all the same can be claimed of Maltese — only the people who speak it are clinging to the language of previous colonial masters.

From the demographic point of

The British heritage

Europe.

Can the same be said of the Maltese? Are they equally conscious of the greatness of the English language, or is English on the way out in Malta? Are our young children at school receiving the instruction they used to receive of the English language, or is there now no time for reading because of the pressure of another subject?

The Maltese must decide whether to remain backward, or like the Italians, be a great European nation, by keeping up and improving their knowledge of English and admiration for English institutions and standards.

Yours truly, ECONOMIST
Sliema.

SIR, — The leading Italian newspaper *Corriere della Sera* recently gave great prominence to Paul Johnson's *The Birth of the Modern World Society 1815-1870*.

This book, which has been a success in the US and the UK, was not reviewed by *Corriere della Sera* in a book page, but in the centre of its business section.

Corriere della Sera's approval of the main idea of the book is unmistakable. It is also an idea shared by the prestigious Bocconi University of Milan.

The gist of the book is that the more highly developed north of Europe must guide the corrupt south, and that Great Britain has been the

APPENDIX Bi

TRANSCRIPTIONAL CONVENTIONS

The transcriptional conventions I adopt here are an adapted form of those described in the 'HCRC Map Task Editorial Conventions and Markup Structure' (Thompson 1993). The adapted conventions I use are described below.

I have completely omitted markup lines, each turn being prefixed instead by G>, (Giver), and F>, (Follower), respectively. Line numbering is also included for ease of reference. Punctuation conventions have been applied as for the original corpus. However, since I have omitted marking up overlap, the absence of a punctuation mark at the end of a turn indicates either interruption of the speaker by her/his interlocuter as for the original corpus, or overlapping with the following turn. The convention of marking discontinuities by means of ... has not been applied in marking up the transcriptions of my corpus.

A number of additional microtags were used to mark up a number of cases covered in the original corpus by markup conventions. These are the following:

- i) Non-speech sounds such as laughs, snorts etc. have been marked by means of the microtag **ns**, e.g.

{ns=laugh}

- ii) Unclear or indecipherable speech has been marked by means of the microtag **is**, e.g.

{is...}

I have not distinguished between long and shorter stretches of unclear text.

- iii) Foreign words or phrases, mainly English ones found in the Maltese text, and a few instances of Maltese words or parts thereof in the Maltese English texts, have been marked using the microtags **nm**, non-Maltese, and **ne**, non-English, respectively. This is so even when the items in question are a loan words, e.g.

{nmlsteep slope}

In cases where an item, besides being non-Maltese or non-English was also abandoned, the microtag **ab** was combined with the microtag in question, e.g.

{nelablx=xorta}

- iv) In a few cases, the microtag **ac** as in additional comment was used, e.g.

{ac=indignant}

Items from the same inventories as for the original corpus covered all instances, even if without phonetic exactness, of the fillers/grunts in my corpus. In instances of fillers/grunts which were

perceived to be slightly different phonetically to the orthographic forms available in the inventory, the closest alternative was used. The microtags **fp**, **gg** and **fg** have however not been used since it was not thought worthwhile, for my purposes, to go to the trouble of differentiating between the three categories.

In addition to **ip** I have used two other microtags, namely, **mp** for middle partial and **ep** for end partial.

No instances of repetition of less than a complete word were found in my data. I therefore have not used the microtag **rp**. Also, I have used the microtag **ph** rather sparingly.

The complete list of microtags is therefore as follows:

| | |
|-----------|-----------------------|
| ab | abandoned |
| br | broken |
| ci | cited word |
| ip | initial partial |
| mp | middle partial |
| ep | end partial |
| le | letter name |
| ph | phonetic |
| ns | non-speech |
| is | indecipherable speech |
| ne | non-English |
| nm | non-Maltese |
| ac | additional comment |

Speaker 5

G = ME1

F = SE

1 G> Okay. You start at the top, left hand corner.

2 F> Alright.

3 G> But not too much in, because there there are {cilcliffs}. So about, three centimetres from
4 the, edge of the paper like, and you start going down.

5 F> Alright.

6 G> Down for about, I'm not very good at calculating but let's say, a finger.

7 F> Okay, shall I go underneath the {cilcliffs}?

8 G> You keep on going right down. Then there's, underneath the {cilcliffs}, right underneath
9 the {cilcliffs}, there is a {cilforge}, directly under it so you can keep on going from the
10 start, down a straight line, and then, turn, right, and you're, under the {cilforge} so to
11 speak.

12 F> Okay.

13 G> Okay? Now, exactly next to the {cilforge} there is an {cilold pine}, but you have to pass
14 between the {cilforge} and the pine, which are, standing practically next to each other.

15 F> So I will go between

16 G> Between the {cilforge} and the pine, up upwards.

17 F> Alright.

18 G> Upwards.

19 F> Okay.

20 G> Okay? Half way, like what you've come down from.

21 F> Aha, alright.

22 G> You stop half way, and then you turn right again.

23 F> Alright.

24 G> And you're on top of the {cilold pine} now.

25 F> Okay.

26 G> And you keep on going, until you're, a bit further, right, from the middle of the paper I'd
27 say.

28 F> Okay.

29 G> Okay? And you're going to start going downwards again now.

30 F> Alright.

31 G> At the, edge of the paper, on the right hand side, there's a {cilpine forest}, not right at the
32 edge,

33 F> Aha.

34 G> parallel to the {cilforge} I would say. Now you have to, go down, by this
35 {cilforest}, okay, a bit further in from the middle of the paper so to speak.

36 F> Okay. Well will I be going underneath, the {cilpine forest}?

37 G> Just a bit, aha, just a bit like ehm, a bit underneath and then, going back out again, a sort
38 of a {lelc} an inverted {lelc} I would say.

39 F> Alright.

40 G> And that's directly underneath the {cilpine forest}.

41 F> Alright.

42 G> Okay? Then you stop there and there's a very, very sharp U-turn.

43 F> Alright.

44 G> And you're on top of the {cilbakery}.

45 F> Okay.

46 G> You, you make a very big inverted {lelc} again,

47 F> Alright.

48 G> and you're turning all around the {cilbakery}, in that {lelc} like, there's a {cilbakery}.

49 F> Aha.

50 G> Okay? Now,

51 F> Are we going passing underneath the {cilbakery}?

52 G> Underneath the {cilbakery}, aha, and bang in the middle of the paper, right right at the
53 {lelx} of the paper, there's a {cilcanal}. Okay, so you'll be walking right up to the
54 {cilcanal}, and that brings you round about to the middle of the paper, right, just a bit
55 further down, to the, north east I would say. You you walk straight down and that's, for
56 about another finger I would say, about {ablnelx=xi} three or four centimetres. Okay?

57 F> I'll be going towards the middle of the paper.

58 G> Aha. You're in the middle of the paper,

59 F> Okay.

60 G> and you turn down, for about three or four centimetres, and, and you're you're next to
61 {cilcrane bay}. Okay?

62 F> Okay.

63 G> Now, the bay is, in the shape of, like an {lelm}, okay? And you're going to be walking
64 in the {lelm}'s cradle so to speak.

65 F> Okay.

66 G> That means you've come down a straight line, and you're going to be going left, in a
67 straight line, that's an inverted {lell}, so to speak.

68 F> Okay.

69 G> This little bit looks like an inverted {lell}. For about another three or four centimetres.
70 And, you're at a point where on the, south east you've got {cilcrane bay}, and on the, and
71 on the, south west you've got {cilwheatfields}.

72 F> Okay.

73 G> Okay? So you're going down but not straight down, a bit towards the west so to speak,

74 F> Alright.

75 G> for another three or four centimetres, right underneath the {cilwheatfields},

76 F> Aha.

77 G> so you'll keep on going to pass from underneath the {cilwheatfields} you have to take to
78 the extreme west so to speak, a straight line.

79 F> Alright.

80 G> Okay? It's like you're seeing a straight line. Then you have to, eh, eh, move towards
81 the the bottom, lefthand corner of the paper,

82 F> Alright.

83 G> in a very large large {lelc} shaped {lelc} shape.

84 F> Okay I'm on the eh

85 G> Okay, just leaving a bit from the corner of the paper, maybe two centimetres.

86 F> Alright.

87 G> And turning back in again to the middle of the paper,

88 F> Alright.

89 G> just a bit, just a little bit and there's the old {ablli=lighthouse} the {cilold lighthouse}.

90 F> The {cilold lighthouse}. Yes.

91 G> That's all.

92 F> That's the finish?

93 G> That's the finish aha.

94

95 G> Alright,

96 F> I don't know.

97 G> Not good? Eh, not bad.

98 F> Ah it's just that

99 G> No, the bakery no, we {abldi=didn't} we didn't go round it.

100 F> Yeah, ah

101 G> But otherwise I guess

102 F> That was all I just didn't go underneath, the bakery.

103 G> I didn't even mention, the {cilrocket {brlhw} warehouse}. I see, that was the trick.

104 F> Then you know you said to come down a bit
105 G> Aha, it's good. Aha it's good, but I, didn't tell you on top of this, but {ablsh=xorta} it's
106 it's just it's good just the same. Just this is the {ablma=mistake} the mistake. Quite good,
107 I would say quite good.

.....

APPENDIX Bii

Excerpt 1

ME> That's all you have upstairs.

SE> Aha.

ME> Two bedrooms and a bathroom.

ME1> Imma one of the bedrooms probably is huge.

SE> It's the size of the house.

ME1> It's huge. Sala, tkun is-sala.

ME> Oh, alright. That must be great.

ME1> Bhalma jghidu s-sala.

ME> Aha.

ME1> That you can put let's say in front of the bed, you can put a sofa, with a television,

SE> You can put a three piece suite in front, in front of the bed if you wanted to.

ME> And that's the one you use.

SE> Yeah.....

Excerpt 2

ME> That's a lovely tractor. That's the first boy toy.

ME1> Papa got it for him. Bilfors he wanted to get him a tractor.

ME> How nice.

ME1> [...] He likes his toys mhux hazin

ME> Yes, yes.

SE> Anything that goes into his mouth is fine.

ME1> Aha, everything goes into his mouth. Imma he loves this ??? Al.

ME> Good.

ME1> He's gone off the chair in fatti.

ME> It's so good.

ME1> It makes him feel independent like.

SE> And does he walk about in it?

ME> What hanini? Aha, he does, he does.

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